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Medical Times

AND LONG ISLAND MEDICAL JOURNAL

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THE JOURNAL OF THE AMERICAN MEDICAL PROFESSION

A Monthly Record of Medicine, Surgery and the Collateral Sciences

Vol. LIX, No. 4 **NEW YORK, APRIL, 1931** **Twenty-Five Cents a Copy Two Dollars a Year**

Acidotic Type of Dyspnea*

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The acidotic type of dyspnea occurs in abnormal blood chemical changes known as acidemia. Acidemia is abnormal acidity of the blood, due to increased H ion concentration, or excess of CO_2 in the blood. The type of dyspnea which accompanies acidemia is rather an unusual type, and not frequently recognized. Its attention was attracted in adults who had heart conditions that were well compensated. In spite of their good compensation, and having no signs of heart failure, they remained markedly dyspneic, even at rest in bed. Their color was cherry red instead of pink or cyanotic. Emphysema also accompanied these cases, and seemed to be an important factor producing the CO_2 blood retention. In acidemia the respiratory rate is only slightly increased, but the *depth* of the respiratory excursions is markedly increased. The rhythm is regular. In anoxemia or oxygen deficiency in the blood, the opposite effect is produced; the rate is rapid with shallow excursions. Increase of CO_2 in the blood stimulates the respiratory center in the medulla, thereby causing deep excursions, increasing pulmonary ventilation in an endeavor to deplete the blood of its excess CO_2. The emphysema which accompanies these cases unquestionably helped to cause CO_2 blood retention, by reducing the alveolar surface. Another cause of this characteristic type of breathing is chronic nephritis. Failure of the kidneys to excrete non-volatile acids—lactic, phosphuric and sulphuric—increases hydrogen ion concentration, and in turn this stimulates the respiratory center. For example, it is known that occasionally in uremia the administration of alkalies tends to restore the normal amount of hydrogen ion in the blood, and lessens the dyspnea. The patient may rouse and breathe more comfortably.

The same holds true in diabetes on the verge of coma or in coma. The type of breathing is slow and deep, because of retention of non-volatile acids.

In acidemia there are certain significant urinary findings because of the excess of the acid radicals, or a relative deficiency of the fixed bases of the blood to combine with them. The urine is more acid in reaction, and there is more NH_4 in the urine. In *severe cases* *acetone* and *diacetic acids* are found. Phosphates, calcium carbonate and urate crystals are found in the majority of specimens. The blood CO_2 combining power is *always low.* Blood calcium is occasionally increased.

A typical case was a man aged 65, who had a chronic fibrosis of the myocardium with an accompanying emphysema and chronic nephritis. These conditions dated over a period of 10 years. His lips, cheeks and ears were cherry red in color. There was *no evidence of cyanosis.* His *heart was well compensated* and he had no signs

(Continued on page 132)

* Read before the Associated Physicians of Long Island, January 31, 1931.

Gumma of the Frontal Lobe*

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Gummata of the brain are probably revealed more often on the autopsy table than in the operating room. In Cushing's[1] series of 1,398 verified cases of brain tumor there were thirteen instances of syphiloma of the brain. Purnes Stewart[2] in his short series of 117 cases had two such cases both of which were in the frontal lobe. The brain is fourth in the site of frequency of involvement, following the arteries, the kidneys and the liver (Tilney).[3]

These so-called chronic granulomata of the brain usually arise in the meninges. They vary considerably in the numbers to be found in a single case, and in size. They may be so abundant as to suggest a sarcomatous process but are more often found singly in different parts of the brain. Occasionally, as in the case herein reported, they reach such a size as to give symptoms and signs simulating a true neoplasm. They have a predilection for the base of the brain and the convexities. At the base they are found most often at or near the interpeduncular space, also they may occur on the vessels arising from the circle of Willis. On the convexities they are found most often in the frontal and parietal lobes.

The syphiloma is often accompanied by bony changes in the overlying skull which may be revealed by an X-ray examination. The meninges may be considerably thickened by a diffuse gummatous meningitis which may cover an extensive area. To the thickened membranes the gummatous tumor may be attached, extending into and invading the substance of the brain; in some instances giving an encapsulated appearance whereas in others no line of demarcation can be seen.

The object of this report is to call attention to the results that can be obtained by surgical removal of a gumma of the brain large enough to simulate a neoplasm.

Brooklyn Hospital No. 1199 (Unit No.) *F.B.* Age 53, Negro housewife, married, was admitted to Surgical Service on February 16, 1926, complaining of a swelling beneath the left jaw of four months duration. The mass was incised but did not resolve. About one month later an excision of the involved area was performed. Section of the tissue removed was diagnosed as chronic granuloma, probably tuberculous. Because of the fact that the wound was indolent and the blood serum showed a two plus Wassermann reaction, anti-leutic treatment was instituted. Following this therapy, the wound healed promptly and patient was permitted to go home. In 1927 a second blood Wassermann was reported four plus. She received no further anti-syphilitic treatment.

In March, 1930, she appeared in the out patient department complaining of headache, dizziness and vomiting and gave the following story:

For several years she had been suffering from headaches. These were not localized but seemed to be rather general in extent. During the past year they had been increasing in severity and frequency and on a few occasions vomiting accompanied the attacks. About December 11, 1929, she fell on the street (fainted), lacerating her scalp. No information could be obtained as to whether she experienced convulsive movements or not. Following this "fall" she experienced periodically "bouts of headache" accompanied by vomiting. In January, 1930, these attacks of "fainting" occurred several times. On one occasion she fell on the floor and was unconscious for about fifteen minutes. These "fainting spells" were followed by vomiting.

No definite opinion could be formed at this time but

* Read before the Associated Physicians of Long Island, Jan. 31, 1931.

(*Concluded from page 131*)

of urea retention or excess sugar in his blood. His heart was not enlarged with the *x*-ray or fluoroscope, but his lung fields showed extensive fibrosis. His urine showed gravity fixation varying between 1005 and 1009, with very faint trace of albumin but *no sugar*, and with *2-plus acetone* and *diacetic acid*. Phosphate crystals, calcium carbonate and urates were found in all his specimens. His blood calcium was over normal—12.3. He complained, however, of an unusual amount of shortness of breath, being able to walk only one or two blocks. He had a real orthopnea requiring three or four pillows beneath his head. The electrocardiogram showed some degree of chronic fibrosis of the heart muscle with a left axis deviation.

Because of the peculiar type of breathing this patient presented, associated with emphysema and chronic nephritis, *in the absence* of sufficient heart failure signs to cause his dyspnea, a blood CO_2 combining power estimation was made. It was reported as 21.7, this being a very abnormal reading. Sodium bicarbonate was administered by mouth, 20 grains every four hours. Three days later the patient breathed easier and felt more comfortable. The CO_2 combining power at this time was 31.3. On the fourth day the urine became alkaline, and the sodium bicarbonate was reduced to 10 grains three times a day. Patient was now able to be up and out of bed with very much less dyspnea. Plenty of fruit juices was added to his diet, which also seemed beneficial. Along with his general improvement his fluid intake was much less, and his urinary output increased. The CO_2 combining power gradually increased with the administration of sodium bicarbonate and fruit juices, and on the 10th day read 42, which is slightly less than the normal blood CO_2 combining power. The normal range of CO_2 in the blood is from about 45 to 55 c. cm. per 100 c. cm. blood.

The positive findings of acidemia or CO_2 blood retention are numerous

1. Cherry red color of lips and cheeks. 2. Presence of emphysema. 3. Slightly increased and *deep* rhythmic breathing. 4. Evidence of chronic nephritis causing retention of non-volatile acids. 5. The presence of acetone and diacetic acid in the urine, together with an acid reaction. 6. Increase of blood calcium. 7. A low blood CO_2 determination.

The administration of sodium bicarbonate and plenty of fruit juices by mouth is evidently the specific treatment, as it definitely causes an increase or rise of the blood CO_2 combining power, and the patient breathes much easier, and is less dyspneic.

473 Clinton Avenue.

patieint was urged to return for further study. During the following three days her condition grew worse rapidly. She became drowsy, speech became indistinct, walking was difficult, and there was inability to control the bowels and urine.

On March 27, 1930, she was admitted to the hospital for observation (B. H. No. 1199) (Unit No.) At this time she was confused and co-operated very poorly. There was marked drowsiness, deficiency of attention, and frequent yawning. Her responses were sluggish. Blood pressure was 112/80; pulse 60. There were no gross deformities of the skull. Fundi showed arterio sclerotic changes of the retinae. No edema of the nerve heads. The right pupil reacted actively to light. The left was considered sluggish. A suggestive left facial weakness of the supranuclear type was present. Speech was slurred and indistinct. An old healed scar was present beneath the left ramus of the mandible. All the

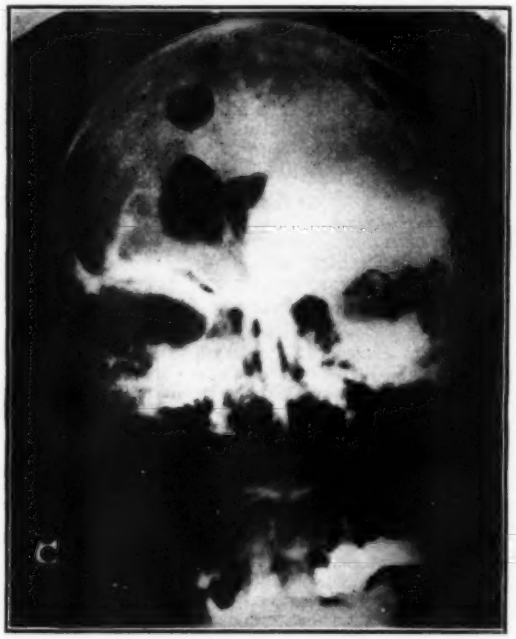

Fig. L. Ventriculogram showing the shift of both lateral ventricles to the right.

deep reflexes of the left side were greater than the right side. Superficial reflexes were equal and active. Plantar stimulation gave a normal response. Pin prick was appreciated over entire cutaneous area.

Spinal puncture—pressure 12 mm. Hg. Cells 8. Wasserman reaction negative. Colloidal gold 0001322-000. Urinalysis negative. Wasserman (blood serum) negative. Wassermann (spinal fluid) negative. Blood Chemistry—Urea 59.4 mgm. per 100 cc. Creatinin 2.08. Sugar 153.8.

The following day the patient was more stuporous and at this time the left optic disc was injected. Four days after admission (March 31, 1930), the following observation was made by Dr. John N. Evans:

OPHTHALMOLOGICAL EXAMINATION

"Both nerve heads are definitely blurred, the left more so. There is also elevation of the left nerve head. There is a 'peach bloom' edema of both retinae which is uniform in distribution. While there is some venous stasis, it forms the least noteworthy element of the picture. There is definite sclerosis of the retinal vessels of the irregular type.

"I cannot interpret these findings as having their origin primarily from increased intracranial pressure. Pressure signs may be more pronounced later. The

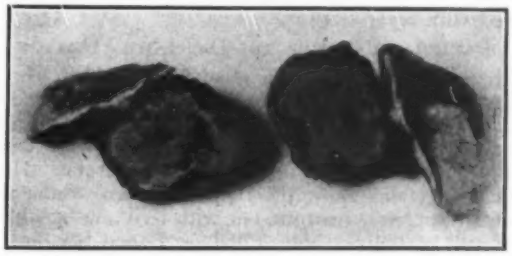

Fig. 2. Gumma removed from the left frontal lobe.

picture now is one of toxic reaction rather than mechanical."

Patient was given intravenous sodium iodide with some improvement in her mental status. At the end of eight days her drowsiness returned and it was quite evident that her condition was getting worse. Spinal fluid pressure at this time was 18 mm. Hg.

On April 12, 1930, ventriculography was performed. Fig. 1 clearly shows the displacement of the lateral ventricles to the right. This was interpreted as due to an expanding lesion of the left frontal lobe. In view of this finding an exploration was indicated.

On April 19, 1930, under local anaesthesia a left frontal flap was outlined and turned down. In the centre of this osteoplastic flap there was a small area of bone destruction, at which point the dura was markedly thick-

Fig. 3. Patient showing healed scar of surgical approach.

ened, had a grayish yellow appearance and seemed moderately tense. One could palpate a small mass in the middle of the operative field. The mid portion of the exposed area of the dura was sacrificed. Upon exposing the cortex a tumor mass the size of a small lime was found situated in the region of the foot of the left middle frontal convolution. This tumor mass seemed to be well encapsulated, was moderately vascular and ap-

parently arose from the dura to which it was firmly attached. The mass was excised after clipping its blood supply which for the most part was derived from the cortical vessels. Bone flap was replaced and wound closed with layer silk.

PATHOLOGICAL REPORT—DR. JAMES DENTON

"Specimen consists of a quadrilateral sheet of dura mater 3 x 3.5 cm. attached to an ovoid tumor 2.5 x 3 cm. This on section is firm, grayish white peripherally and yellowish white centrally. The yellowish white centre is opaque and partially or completely necrotic. Histological—Sections show the central portion of the mass almost completely neurotic but with hazy outlines of the cells still partially visible. The peripheral portion consists of fibroblastic granulation tissue infiltrated with lymphocytes. In places there are tubercle-like bodies containing giant cells. The mass is likewise attached by this same type of granulation tissue to the inner surface of the dura. The dura is thickened, fibrotic and contains thickened vessels. There is an incomplete rim of brain cortex about the lesion.

DIAGNOSIS—GUMMA OF THE BRAIN

With the exception of a state of mental confusion during the two days immediately following the operation, the convalescence course was uneventful. There was no suggestion of motor speech disturbance. On the fourth postoperative day when the patient had recovered sufficiently to co-operate, there was observed a gross tremor of the right hand (whether this was present before operation or not cannot be definitely stated as her condition was such that accurate observations were impossible). After allowing her out of bed on the twelfth day the gross tremor was noted to be present in both the right upper and lower extremities. Upon discharge from the hospital on the nineteenth postoperative day there was present a well healed operative scar, subsiding edema of the optic nerve heads and diminishing tremor of the right upper and lower extremities.

Patient reported to out patient department at regular intervals. The tremor of the right side, previously described, gradually disappeared over a period of seven weeks from the time of the operation. The edema of the optic nerve heads receded and had completely disappeared at the end of two months. At the present time, ten months after operation, she is alert mentally, has gained in weight and feels better than she has for the past five years.

Discussion

Lesions in the frontal area give rise to a number of findings, many of which this patient presented; namely, change in personality with inattention, confusion, slurring of speech, difficulty in walking (reeling character) and loss of sphincteric control. In addition there was noted frequent yawning before operation and contralateral tremor of the right arm and leg following operation. These observations require further comment.

Whereas yawning is a well known and common finding late in the course of expanding lesions of the brain causing a high degree of cerebral compression, it is also frequently an early finding in lesions of the prefrontal area. This point was stressed by the late Dr. Junius Stephenson. He contended that in lesions of this area yawning had a particular significance, and that it was apt to occur long before other focal or general evidence of brain tumor developed.

Finally the contralateral tremor as it occurred in this instance is of more than casual interest. It seems to us that its conspicuousness, its long persistence after surgical removal of the gumma, with eventual complete disappearance, is very suggestive that lesions of the frontal lobe can initiate tremor. The nature of the tremor was not such as could only be revealed by a careful examiner. It was coarse, rhythmical, and complained of by the patient. It may possibly have been caused by the slight trauma incident to the removal of the tumor. The fact that it did exist even under these circumstances, after disturbance to a precise circumscribed portion of the frontal lobe, would seem to us a fairly convincing bit of evidence in favor of attributing to tremor a localizing significance in suspected lesions in the frontal lobe.

The tumorous nature of this lesion was revealed by the ventriculogram (Fig. 1) which suggested an expanding lesion in the left frontal region. It is true that her general clinical progress suggested a brain tumor, and her luetic past history pointed to a possible gumma. While in retrospect she presented many clinical signs of a prefrontal tumor, exact focal diagnosis would have been impossible without the evidence furnished by the ventriculogram.

While gumma elsewhere in the body may disappear in response to antiluetic therapy, there is little or no response in gummata involving the brain. Surgical removal is the only method of choice in the treatment of a gumma of the brain simulating neoplasm.

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96 Joralemon Street.

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Indications and Contraindications of Encephalography and Ventriculography

According to Eugene P. Pendergrass, Philadelphia (*Journal A. M. A.*, Feb. 7, 1931), the advantages of ventriculography are: 1. The ventricular system is completely outlined. 2. Brain lesions, such as tumors, brain abscesses and ventricular blocks from any causes, are localized. The disadvantages of ventriculography are: 1. Two incisions and two trephine openings are required and the brain is punctured twice. 2. Hemorrhage may occur following the piercing of an unsuspected occipital lobe tumor. Experienced neurosurgeons, however, can detect the difference between normal brain and tumor tissue, and, should a tumor or hemorrhage be encountred, one could proceed with the operation. 3. Reactions may follow the introduction of the air. Grant states that this can be obviated by proceeding with the operation if the tumor is localized by the ventriculogram. If the tumor is not localized, repeated ventricular tapping with removal of the air will relieve any increase in the intracranial pressure. 4. Mortality is associated with the procedure. 5. There may be failure to find and drain both ventricles. 6. The subarachnoid spaces may not be delineated. The advantages of encephalography are: 1. The procedure is simple. It can be used in adults, children and infants. 2. There is little mortality. 3. Subarachnoid pathways and the ventricular system are visible. One can visualize the brain as a whole. 4. One can demonstrate lesions on the surface, such as arachnoiditis and brain atrophy, which cannot be demonstrated by ventriculography. 5. Brain tumors, brain abscesses and degenerative lesions with or without slightly increased intracranial pressure can be diagnosed and localized. 6. The lesions in patients with epilepsy receiving treatment can be followed. 7. Posttraumatic headache is relieved. The disadvantages of encephalography are: 1. It causes severe headache, some nausea and possibly vomiting. 2. It cannot be used in posterior fossa tumors because of the danger of causing a foraminal hernia. 3. The posterior and inferior horns of the ventricles are not easily drained. If it is desirable to outline these portions of the ventricle, it will be necessary to examine the patient in the postures utilized in making ventriculograms. The two procedures are sometimes necessary on the same patient, especially in differentiating between an infratentorial and a supratentorial lesion. The neurosurgeon makes a totally different approach on these lesions and an exact diagnosis is essential.

The Sinuses in Children

Sinus infection should be looked for especially in children who have had tonsils and adenoids removed, and who do not seem to properly respond with general improvement. Persistent undetermined cough in children is another indication for examination of the sinuses, especially the antra.—*Am. Medicine.*

The Hospital and the Medical Profession*

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May I first express my thanks to your President and to the Chairman of your Program Committee for this invitation to talk on the subject—The Hospital and the Medical Profession.

The matter of deciding upon a method of approach to the subject of my discussion was, for a time, puzzling. At the end I decided to avoid mere verbal felicities and confine myself to an earnest scrutiny of some of the issues agitating the medical community of today. Frankness, it seemed to me, would be more warmly received, especially when, combined with this candor, there is a genuine interest in the future of the doctor and, I think, a sympathetic understanding of his bewildered lot.

To most of us there has come, in the past few months, an altered conception of values and a new sobriety. The collapse of our supposedly sound economic structure, bringing home to many of us its painful reverberations, has jolted us more vehemently than we care to admit. We have been unexpectedly spilled from the spacious and comfortable lap of assurance in which we were resting. Only today are we beginning to realize that the contentment of the past was not a permanent blessing, but a temporary lethargic state.

The pity of it is that we permitted ourselves to become victims of this mental astigmatism when the "handwriting on the wall" which, now in retrospect, we can so easily decipher, was quite, quite obvious. If only we had taken the time for an intelligent analysis; if only we had not shut our eyes to the experiences of the past which contained so many clues, so many screaming warnings.

Only today, with our standards so abruptly and so convincingly altered, with foundations of our faith none too certain, are we beginning to sense our fatal mistake in not closely examining these very foundations. Today . . . and this is most significant . . . people are beginning, after a long period of inertia, to think.

The situation in the medical community is somewhat analogous. Medical practice has, in recent years, changed its complexion entirely. Formerly, the task of the physician was a lonely one. The burden of establishing a diagnosis or of following through a course of treatment of a patient depended entirely upon his own experience and acumen. There were not the auxiliary laboratory aids without which the present-day physician too often considers himself helpless; the practice of consultations with other physicians was an infrequent one. At that period, also, the conceptions of the function of a hospital were strikingly different; only the hopelessly moribund and the wretchedly poor applied for assistance. Today, we have seen the growth of organized social agencies, and the development of an acute era of specialization. Today, the isolated character of the practitioner is altered so that he is almost always part of a cooperative endeavor, with the hospital as the pivotal point in providing medical care for the community, with the result that we have new problems, some of which are obstinate and difficult to solve.

As we run through the different phases of the problems facing us today, our impression is one of confusion. In the midst of the babble of voices we can recognize those of strangers, outsiders who, finding that no solution has been forthcoming from the medical profession itself, are beginning to overwhelm the organized medical agencies with patronizing suggestions. They explain their interference by the argument that since the problem of the doctor is inseparably interwoven with their own, and since no adequate solutions have been forthcoming from the doctors themselves, that *they* should be given an opportunity. *It is imperative, therefore, that organized medicine itself should undertake the treatment of the precocious child which it has created in recent years, a child troubled by illness of a most distressing nature. Otherwise, we will be dismayed to find these outsiders, somewhat impatient with our fumbling and delay, forcing their own prescriptions down the child's throat. Need I point out that one of the most distasteful and probably the first of these medications will be State Medicine.*

It behooves us therefore, to attempt to find these solutions ourselves; to plan for organized discussion and study, to include in our planning the psychological and sociological, in addition to the scientific, implications of the different problems. Only under these circumstances can we hope to forestall outside intervention which must, of necessity, be haphazard and indifferent.

The medical profession has often expressed itself bitterly relative to the privileges permitted those ill-equipped men who practice in specialties that sometimes infringe upon the field of the physician. And rightly so. But, would it not also be appropriate to restrain the ill-prepared in our own midst, to turn our attention to those upon whom the Hippocratic oath rests lightly.

Do physicians ever wonder how flimsy is the checkup on the work of these incompetents, unless, of course, they are found conspicuously guilty of malpractice?

He is active at the beside in the home. Or even in an institution, whose standards are slipshod, or in his office. And there is no method, as I say, of checking up on the character of his work. Since he is often the type who avoids the hospital, there are no colleagues to pillorize him for his mistakes, to rid him of erroneous or obsolete medical notions.

Intelligent laymen are often asking us to give them some idea of the abilities of specific doctors. How are we to tell? Under the present arrangement, the bare fact that a man is or is not affiliated with a recognized hospital may or may not be a criterion. Many physicians of genuine scientific interests are barred from hospitals either because the staff is already overcrowded, or because of unfair discrimination. It is my hope to suggest a method by which it may be possible, not only to create more opportunities for hospital appointments to physicians of merit, but by which it will also be possible to detect those men who, by their very refusal to

* Read before the Medical Society of the County of Kings, Brooklyn, January 20, 1931.

conform, will give prima facie evidence of their own lack of faith in their professional equipment.

The question presents itself. How are upright practitioners to protect themselves against the besmirching antics of the unscrupulous? How are those with all the qualifications of upright practitioners to be distinguished from the others?

The selection of staffs of hospitals, particularly those unaffiliated with teaching institutions, is a most difficult problem. Lay boards make their influence felt. Social and financial exigencies lead them to exercise a domination which they justify on the grounds of their financial support. They have scanty technical knowledge of the needs of a hospital and none of the qualifications necessary to obtain humane and scientific service. Their value is not deprecated—but should there not be a definition of their power, or, as I shall soon suggest, a measure of guidance given to them better to fulfil their obligations to the community?

Too often, alas, a man obtains promotion to work in an institution not because of scientific aptitude, but because he has a social flair; not because of his potential value to the community or his scientific zeal, but because he has the sagacity to select "in-laws" whose contributions are an insidious bid for an appointment.

Since the key-note tonight is one of frankness, let us briefly face the fact that there are many examples of the sinister effects which result from the use of social influence in determining medical appointments or promotions in hospitals.

To the earnest young physician to whom a hospital appointment means not only an opportunity to improve his scientific training and to keep abreast of the march of medical progress, but also the promotion of private practice, it is a grave matter to be barred from appointments and promotions because of favoritism or other influences. It destroys incentive and undermines his faith in these institutions which, because they are often dignified by recognition from the American Medical Association and the American College of Surgeons, give prestige to the aspiring young doctor. Favoritism that deprives worthy physicians of these benefits defeats one of the fundamental reasons for the existence of hospitals. The public needs doctors who have reasonable access to all facilities for widening the scope of their knowledge and experience.

The point I wish to make, however, is not alone the abuses practised by some lay boards. Far from it. The truth of the matter is that many lay boards have very often demonstrated their capability of exercising sagacity and vision, due to their practical training, a qualification often sadly lacking in a body of medical men. *What I wish to emphasize is that there are no clear standards by which a governing body of a hospital can determine the professional equipment of medical men whom it appoints to hospital positions.* There are, on the other hand, many factors which may tend to confuse a conscientious lay board of trustees, anxious to appoint a staff of skilled surgeons and physicians, qualified by reason of experience, character and scientific interest. What standards, I repeat, are there to help them in their choice, earnest or industrious though they may be? Shall such lay boards consult leading physicians in the community? Such information concerning the qualifications of a given physician for a hospital position will, of necessity, be scant, and comparatively inadequate to serve as a basis for determining a physician's eligibility to a particular rank. Here, too, the personal equation, personal prejudices or other personal factors, sway judgment. Besides, how many physicians are particularly interested in the progress made by their young colleagues? As medicine is practised today, they are all too absorbed in their individual progress.

With the "closed" hospital, as we know it today, there are often difficulties for the outside physician who is lacking in powerful friends and helpful "contacts." What about those who have every right to expect hospital affiliation, if they manifest their willingness to assume the obligations of a hospital appointment?

What is the solution? How are we to set forth qualifications so clearly that boards of trustees can gauge the merits of the different applicants? In a previous paper, read at the American Hospital Association convention, I suggested the formation of a competent national committee which would grade positions so that lay boards could have specifically defined standards by which to rate applicants for the positions. This work might readily be undertaken by the County Society, presuming, of course, that funds were made available by one of the foundations. This Medical Society is, after all, in an excellent position to conduct this routine and may be able to rate all the hospitals within the county on the basis of the adoption of this plan. This plan to grade positions so that the lay boards would have explicitly defined standards by which to rate applicants for the positions, would not rob the lay boards of the power of selection, but would be a guide. It would not rob them of the opportunity to make a choice for the appointment of one of several men approved by the proper authorities as fitted for the position of, let us say, "Adjunct." Under this system, a man's privilege to apply for an "Adjunctship" implies that he has a definite amount of experience, that he meets definite requirements as to ability to assume responsibility, and as to a certain age—neither below, and is thus lacking in maturity, nor above, and is thus too old for the position, thus barring the way for another man of suitable qualifications. Could there be a more effective way of curbing favoritism, and at the same time allowing members of boards of trustees a certain leeway in making appointments, of leaving them a choice in the matter of selecting from a group of men, all equally qualified?

The method by which these standards are to be fixed is to be determined by the collaboration of representatives of national organizations working with the representatives of the county society. All of these agencies, I have no doubt, would be delighted to cooperate.

It would not be amiss, at this point, to suggest also that such a committee work out a uniform terminology in every hospital, whether private or governmental. Not only the public, but even persons connected with hospitals, are frequently unable to understand what rank the title "Assistant" or "Adjunct" represents, since in the various hospitals it connotes widely different ranks.

Does it mean anything to a patient to know that a physician, let us say, is an "Associate" in a certain hospital? And, yet, it should be as significant as the title "Captain" or "Lieutenant" in the Army or Navy. In other words, we do know what the basic requirements and qualifications are for a Captain in the Navy, but we do not know what they are for an "Associate" or an "Adjunct" in a hospital.

Lay members of hospital boards are mostly reasonable, judicious men, otherwise they would not assume the responsibility of performing public duty as trustees. And when such standards will be presented to them by the county society, the expediency of a merit system will undoubtedly appeal to them.

The plan which I am presenting tonight is by no means detailed enough to cover every contingency. There may

be some objections. But it seems to me that the idea is essentially and basically a wholesome one, and that it will inspire public trust in hospitals and in doctors. It will encourage the promotion of physicians on the basis of fitness rather than influential affiliations. Certainly it is worthy of thought, for it presents a means of avoiding the humiliation to which doctors are subjected when they seek hospital appointments or promotions which are really within the right of every worthy physician.

Let me also add that a great many directors of different institutions in this borough, to whom I have spoken in this regard, have told me confidentially of the relief which such a measure would afford them personally, of the innumerable embarrassments it would avoid.

There may be subtle variations and phases of the problem which will present difficulties at the beginning, but I am confident that with good faith on all sides, and patience, it will prove a great help in solving problems arising within the medical profession, to the great relief of the interested administrators and to the benefit of the public at large.

It will always redound to the credit of the physician of this maladjusted era, that despite the barrage of criticism, a great deal of it superficial and unfair, some of it from medical agencies which are losing sight of the very principle for which they were created, he should be attempting a detached critical appraisal of his own profession. This striving towards self improvement is an excellent and clearly defined answer to the many critics of modern-day medicine whose acquisition of half-truths concerning medical practice today makes their criticism the more pernicious.

Many of us are only superficially aware of the inherent evils of the private sanatoria. One questions the scientific zeal of a physician or a group of physicians who find it necessary to conduct their affairs in privately run institutions for profit—where the facilities are often inadequate and where the commercial aspect of medicine is the only element stressed.

The public cannot be given a fair deal in those institutions and physicians of repute should take an affirmative stand against them. Unless physicians of standing help in the missionary work of bringing to the attention of people the dangers of venturing into institutions where most often men of limited experience have carte blanche, we are not fulfilling our obligations to the same public from whom we are expecting cooperation in our attempt to have them understand the problem of the cost of medical care from the point of view of the physician.

What of the medical centers? Where are they leading us . . . these attempts to introduce large scale commercial technique into medicine? What are their purposes and how are they accomplishing them? *It seems to me that the large medical center represents the hysterical phase of the contemporary picture of scientific medicine. There is something unwholesome in the conception of a large institution flourishing by reason of the support given to it by physicians and at the same time creating a form of unfair competition which threatens the very livelihoods of those same physicians upon whom it depends for support.* And, there is even a greater menace. These gigantic medical enterprises threaten to deprive medicine of that quality which has been its very soul for ages . . . the human, personal quality. Medical centers are more apparently assuming the shape of Frankensteins which will tend to dehumanize the art of medicine, which will help carry the unfortunate phases of specialization to an even more alarming narrow development. Unless we have some definite stand from the physicians, organized in the different communities, pointing out that the very nature of medical achievement is such that it depends upon the intimacy of a small institution, upon the familiarity and informality which seem so essential to creative activity, we will soon have with us a medical robot, part of a ponderous machine where efficiency may dominate, but not the spark of genius; where tremendous numbers of patients may annually receive medical care, but none the personal contact with a physician comprising that very psychological approach, the intimacy, the sympathetic bond, which we all concede is so essential.

And, while we are on the subject of maintaining the self respect of the physician, if we are to expect outstanding work from him, let me direct my attention for a moment to hospitals which themselves are too often guilty in this regard. It seems to me that boards of trustees and medical directors too easily lose sight of the fact that doctors are not salaried employees. We too often forget that the entire institution revolves about the medical staff. Since, ultimately, the entire success of an institution depends upon the cooperative spirit of physicians, it is important that more cooperation be given them in the matter of making available opportunities for carrying on research; of helping in the solution of economic difficulties; of trying to throw some light on ethical complications. Hospitals should fulfill their obligations as postgraduate teaching centers and should even go to the expense of providing opportunities for exchange lectures, surgical demonstrations, medical conferences, etc.

It seems to me also appropriate that doctors themselves should give their attention to the question as to whether or not it would be advisable to limit physicians to an appointment to one institution. We might well ask the question, would this not be desirable from the point of view of reducing monopolies on hospital appointments, thus making it possible for more men to avail themselves of the benefits of hospital affiliations? This is a more serious problem than would at first appear, and it would be my suggestion that serious thought be given to it. Certainly I would be very much interested in a symposium on the subject in which the doctors themselves are the leading participants in the discussion.

I am very anxious in this discussion, in which I seem to be manifesting great concern over the plight of the younger physician, to maintain a sense of balance. While I am most eager to see that opportunities be placed in the way of those who prove their abilities, and while it is my hope that some method can be devised by which the first few years of economic distress be somewhat softened, I am equally as anxious to avoid giving the impression that I am proposing a modified form of coddling.

For it is my earnest belief that the men who have achieved important places in the scientific world have done so in spite of these very handicaps; that, while difficulties have weeded out the weak of heart, the robust and purposeful have remained and made contributions of everlasting value.

It is important to eliminate the many abuses to which our young men are subjected, but it is also essential not to have them shirk the travail which is such a vital factor in helping fashion the urbanity, the scientific interest and the student's humility which we unfailingly recognize in the truly great physicians of our time.

And while we are on the subject of the innumerable difficulties which beset the younger men, might it not also be appropriate here, before I close, to question whether, despite the difficult barriers which they have to pass even before they enter medical school, the younger men of today, as a class, are fitted for the profession.

Many of us here have had unusual opportunities to watch the work of these young men, to become familiar

(*Concluded on page 147*)

Unsaturated Fats in the Treatment of Vitamin Deficiencies*

F. E. CHIDESTER, Ph.D.
Morgantown, West Virginia.

For several years we have been experimenting with various iodin compounds including ferrous iodide and manganese iodide. Our success in the treatment of xerophthalmia with ferrous iodide, which resulted in the protection of rats from many of the symptoms of Vitamin A deficiency and which cured other animals and prolonged their lives for ten months, convinced us that we needed only to furnish fats in order to get still better results (Chidester, Eaton, and Thompson, 1928).

The important papers of Burr and Burr (1929, 1930), and the significant studies of McCarrison (1919) and the Mellanbys (1921) on the "fat-iodin balance," led the writer to outline in June, 1930, a series of experiments with the so-called "essential fatty acids" of the Burrs. This was published early in July, 1930, in the *Collecting Net*. Our experiments with linoleic acid had been preceded by studies with oleic acid, stearic acid and ethyl butyrate, none of which proved successful (Papers in press).

The interest of Dr. L. G. Wesson in the possibilities of correlating our studies on iodin and fats with his own important work on unsaturated fats was so great that he consented to collaborate in the preparation of a critical summary which was sent to the MEDICAL TIMES in August, and appeared in the issue for November, 1930, with the title of "Dietary Unsaturated Fatty Acids and Iodin."

That the unsaturated fatty acids were deemed highly significant in vitamin deficiency by others than ourselves is evidenced by the studies of Evans and Lepkovsky, who showed (Oct. 19, 1930) that glycerides of myristic and capryllic acid from cocoanut oil were extremely beneficial in the treatment of animals deficient in the antineuritic Vitamin B. These authors had not seen our discussion in July.

As Rapport has indicated (1930), "the evidence is against production of carbohydrates from fatty acids in the animal." But in Vitamin B deficiency there may be a quite significant lack of fats, with the iodin in the diet slowly accentuating this condition (Chidester and Wesson, 1930).

It has been interesting to us also to read the report of Bliss (Dec. 5, 1930), who had examined the protocols published by Goldberger and noted the beneficial influence of "syrup iodide of iron U.S.P." in black-tongue of dogs. Bliss treated cases of human pellagra with iron administered orally, or in extreme cases, intravenously. He also treated black-tongue with iron administered by the intravenous route. Doctor Bliss emphasized the influence of iron, but did not stress the importance of iodin, and had apparently not seen two papers published by us (1928), in which we stated our thesis regarding the importance of minerals (including ferrous iodide) in the treatment of vitamin deficiency.

At the Cleveland meetings of the A.A.A.S. in December, 1930, we (Chidester, Eaton and Speicher) stated that "linoleic acid, in combination with ferrous iodide, induced growth and the ferrous iodide cured the xerophthalmia." We also stated, "Our results show that a temporary stimulation may indicate actual substitution for vitamins, but that in reality, the animals may have synthesized vitamins from stored foods. There are apparently a number of catalyzers effective in the production of Vitamin A in depleted animals."

Sixteen of the seventy rats on an experiment with linoleic acid and ferrous iodide, started June 6, 1930, were used in the positive and negative control groups. Fifty-four rats received linoleic acid and ferrous iodide in various combinations, with and without irradiated ergosterol. The fifty-four animals were so completely depleted of Vitamin A that only twenty-one were able to eat the mixture. Of these, the group receiving linoleic acid, ferrous iodide and irradiated ergosterol had six individuals that were able to eat the mixture, and all of these were recovered from Vitamin A deficiency, five of them living for over twenty weeks, their growth curves also showing the beneficial influence of the substances administered.

Without forcibly feeding the animal, we have demonstrated that for those that will consume the linoleic acid and ferrous iodide combination there is apparent ability to synthesize Vitamin A.

The significant studies of T. Moore, who showed (1930) that carotin, a highly unsaturated substance, can be transformed by the rat into Vitamin A, may be explainable by the unsaturated condition of the carotin, and possibly also by its administration in arachis oil, which is, itself, unsaturated. Again, as Tammes and Kohl have shown (1906), carotin absorbs certain rays of radiant energy which may be made use of in photosynthesis.

Dismissing for a moment the fact that carotin (C_{40} H_{56}) is itself highly unsaturated, and that it might seize available iodin and transport it into the body of the rat, in usable quantities, we may venture to suggest that the arachis oil furnished with irradiated ergostersol would provide necessary unsaturated fat, and that the carotin might possibly absorb and slowly give off radiant energy sufficient to aid in the synthesis of Vitamin A. The activity of di-iodo-carotin, and the fact that the purest preparations of the (unsaturated) carotin are the most active, lead us to suggest that perhaps iodin, seized from the atmosphere, or possibly still retained in the purified carotin, may be responsible for the beautiful blue color produced by the Sb Cl_3 test.

Burgi (1930) has reported that chlorophyll, phaeophytin and chlorophyllin freed from xanthophyll and carotin, were able to induce growth in Vitamin A deficient rats.

Nakahara reported (1926) that Vitamin A speeds up assimilation of foreign fats, by increasing the number of fat-engulfing cells. Burrows and Jorstad have shown (1927) that low salts and low vitamins predispose to tumor formation and favor the growth of quiescent tumors. Perhaps iodin may be important in the prevention of *tumors*.

Dr. A. P. Mathews suggested (Chidester, 1930) that possibly iodin enables intestinal bacteria to make

* From the Laboratories of West Virginia University.

Proceedings of the New York Physical Therapy Society

Academy of Medicine, Wednesday, November 5, 1930

Case Presentations

Congenital Torticollis

K. G. Hansson, M.D.

DIRECTOR PHYSICAL THERAPY DEPARTMENT, HOSPITAL FOR RUPTURED AND CRIPPLED

New York, N. Y.

I have found that when we analyze our results in physical therapy we have a great many successes and a great many failures. Personally, I believe that we can learn more by taking up our failures and talking about them than by talking about our successes.

The cases presented to you tonight are cases of congenital torticollis. The cause of torticollis is not settled. Most probably it is due to hemorrhage into the sterno-cleido-mastoid at the time of birth. The immediate result is a shortening of the sterno-cleido-mastoid on that side, producing flexion to the side that is shortened and turning the chin to the opposite shoulder.

There are several types of so-called congenital torticollis. One is where the physician discovers it and sends the patient for treatment early. Those are easy cases. I will show you one of those cases. Another type is where the patient comes to the hospital at three, four, five or six years of age, or at any time before ten years. With proper corrective treatment the result is fair. The third type is where the patient comes for treatment after the deformity has persisted for ten years and more, where secondary deformity has set in.

When it comes to treatment, we have probably all had experience with applying heat, massage and strapping, and with different electrical currents. I do not think you get a permanent result and a proper treatment unless you analyze the pathology back of the deformity.

We understand from the studies of Magnus and De-Klein about geotropism that the retina of the eye photographs certain surroundings on certain areas. If the position of the head is changed there occur certain reflexes which tend to replace the head in its former position. We have all had the well known experience with the cat which when held up by the legs and dropped will always fall on his feet. If you apply that theory to torticollis patients of ten years standing, you will find that they have the impression of being straight when they are not. If you try to straighten them, they have the impression of being crooked when they are really straight.

Showing Cases

First Case.—This little girl, Lillian, is six years old. She came to the Hospital for Ruptured and Crippled this spring. She had a right torticollis with marked deformity. She had to have a tenotomy, then was put in plaster of Paris. If you look at her back, there is no secondary or other deformity present.

Second Case.—This boy, Peter, was 16 years old when he presented himself at the hospital and had very much the same treatment as Lillian. He, however, shows very definitely the secondary changes that take place. He has a scoliosis, which is very insusceptible to any correction. He has all the deformities from the head down to the hips. They both had similar treatment. Both had a tenotomy. Both had plaster. Lillian shows perfect results. The boy has all the secondary deformities.

The point I want to bring out is that so far as treatment goes, we cannot gain much with local treatments, by massage or electric treatments. It is a question of posture. You have to reeducate the patients entirely, give them a new viewpoint. The minimum is treatment for twelve months. Many of the patients have to continue treatments even after such a period.

(*X*-ray photographs shown.)

Discussion of Dr. K. G. Hansson's Paper on Congenital Torticollis

Heinrich M. Wolf, M.D.—Last Monday Professor Forster spoke on the treatment of these severe types of torticollis, of congenital type, and he showed very remarkable results by a certain operative method he has devised. He exposes the sterno-cleido-mastoideus and cuts all of the nerves coming from the accessorius and at the same time he cuts the upper three or four posterior cervical roots. The purpose of this is to paralyze not only the contracted sterno-cleido-mastoideus but to relax the muscles of the upper cervical region. He showed four or five pictures of old people with very marked congenital torticollis in whom he had obtained really excellent results.

Vitamin A. This is not at all unlikely, we believe, since Bloor, Hill, Sperry and others have shown that, under proper conditions, the bacteria of the intestine will cause animals to exhibit, in their feces, larger quantities of the unsaturated fatty acids than were presented in their foods. Animals on deficiency diets receiving salt mixtures which contain iodin are materially benefited by feces consumption.

We are using a number of unsaturated fatty acids in place of the rapidly hardening linoleic acid, and expect better results with several of them. Thus far, we have simply piled up evidence in favor of the more general use of cod-liver oil in a number of nutritional deficiencies. Studies now in progress may point the way to treatment of other oils with minerals which will furnish vitamins other than the Vitamin D now secured by irradiation.

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Dr. Hansson has not spoken of those peculiar cases of torticollis which are probably a form of tic. These people can, by using one finger as a support, straighten the head and keep it straight as long as the finger is kept in place. Dr. Rothenberg of Brooklyn has cured one of my patients by injections of alcohol into the muscle, a case I had not been able to do anything with.

I agree with Dr. Hansson that it is useless to apply physical therapy. I have tried to use the mirror drill. The method consists in training the patient in front of a mirror so that he learns how to control the position of his head by sight. The method is tedious but sometimes leads to success.

Discussion closed by Dr. K. G. Hansson—The case which Dr. Wolf mentioned is different from the congenital torticollis; the spastic type is different. The patient Dr. Wolf speaks of represents quite a different pathology.

I still want to emphasize the importance of the general posture treatment in these cases of torticollis and that the treatments should be given as early as possible. The treatments should be carried on for at least a year.

Reports of Nasal and Sinus Cases

Charles R. Brooke, M.D.
New York

In the treatment of nasal sinus infections, since the symptoms are so variable, each case should be individualized as to indicated measures. The treatment of these cases should be divided into acute, subacute and chronic stages.

In acute infections, which include the common head cold, it has been found that radiant light and heat and the infra-red rays give prompt relief. Technic of application: A radiant light and heat lamp is directed over the face for 20 minutes duration or an infra-red ray lamp (zoalite) in a similar manner.

In the subacute infections, the application of infra-red ray to the face for 20 minutes has been found to give the best result. This application should always be followed by intranasal high frequency or diathermy. The technic of application: an intranasal high frequency non-vacuum electrode is inserted well into the nasal cavity, and attached to one pole of the d'Arsonval circuit and the other to a diffusive metal electrode about 1 inch wide and 4 inches long which is placed over the nape of the neck. A current strength is allowed to flow for 10 minutes, to tolerance of the patient.

In the chronic and pansinusitis cases, diathermy offers the best results and experience has shown that the effects produced by diathermization of the infected sinus invariably give prompt amelioration of symptoms. The technic of diathermy application: a special sinus diathermy electrode is used and is particularly adapted for the purpose of diathermizing all the sinuses, i.e., antral, ethmoid and frontal, simultaneously. This electrode is simple but unique and is passed around the audience for inspection. The dose of diathermy should be at least 500 m.a., sometimes higher but never lower to be effective. Diathermy to the sinus areas from without should always be followed by the intranasal diathermy as described, with the use of a high frequency non-vacuum electrode.

In all nasal and sinus infections, the use of the ultraviolet rays, *using an intranasal quartz rod,* is advised when the nasal cavities are draining. The ultraviolet rays act as a bactericidal agent and as an adjunctive measure should be used whenever sterilization effects are indicated. In some types of nasal infections, where the turbinates are markedly swollen, the use of zinc ionization and adrenalin ionization have been found effective modalities.

Before the use of any physical modalities, the nasal cavities should be cleansed of all mucus and discharge, and where there is much swelling and congestion of membranes I advise the use of Synephrin solution, which I find produces a definite shrinkage permitting of the insertion of the electrodes.

Physical measures should not be employed exclusive of indicated surgery and medical applications. The use of physical modalities in conjunction with certain medical applications, especially the use of Mandel's solution tampons followed by the infra-rad rays, promotes absorption of the medicaments and offers exceedingly prompt relief in many cases.

Case Reports

Case I. J. M. Referred for treatment of frontal sinusitis. Confirmed by X-ray on Sept. 2, 1930. Received diathermy and intranasal high frequency on alternate days. This patient received a total of 10 treatments and on Sept. 28, 1930, was discharged symptom free.

Case II. W. L. Case referred for treatment of pansinusitis, chiefly involving the antra and ethmoid sinuses. Confirmed by X-ray. Began treatment Feb., 1930, and during this month had 10 treatments; during March he had 8 treatments; and during April 4 treatments. Received a total of 22 treatments and was discharged symptom free. The technic was diathermy, using the special electrode for 20 minutes, with intranasal diathermy as described to you this evening.

Discussion of Dr. Brooke's Cases

Dr. Leon T. LeWald—Have these cases been X-rayed?

Dr. Brooke—All confirmed by X-rays.

Dr. Lewis Julian Silvers—I have been very much interested in what has been done with physical therapy. I had no idea of what had been going on nor of the results obtained until after I had tried surgical methods. Then I found that the same results might be obtained by electrocoagulation, radiant heat and ultraviolet.

I have not heard Dr. Brooke mention coagulation of the turbinates, which is of course surgery. Results from electrocoagulation of the turbinates are very marked in chronic cases where patient has refused operation. Electrocoagulation of the turbinate, with the opening of the exit from the sinus, has been to my mind the best conservative method of relief in patients suffering from sinusitis. The radiant heat application is very effective. I should like to ask about allergic sinusitis—those cases not responding to operative interference.

Physical therapeutic means are absolutely gratifying to both patient and physician. The minimum of risk with the maximum of result is to my mind obtainable only by means of electrosurgery.

Dr. Emilio L. Hergert—I agree with Dr. Brooke that in the acute cases the treatment by radiant light and heat is very good. However, when it somes to the subacute and chronic cases, unless the physician can afford a nurse and two or three rooms, it is a little difficult to apply diathermy to a large number of patients at one time. During diathermy the patient is usually shackled and cannot move if he is getting too much heat; whereas with radiant light and heat he can move away or kick the lamp away. At any rate I seldom use diathermy in such cases.

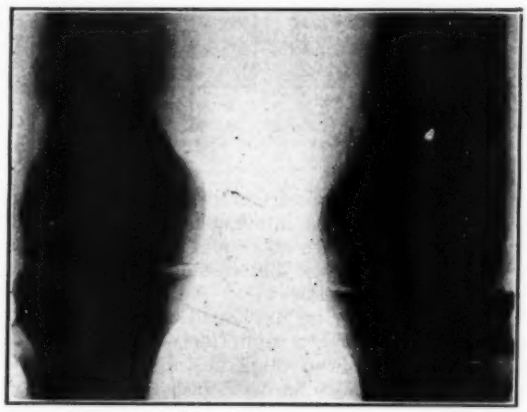
In regard to the iodine preparations, to the Mandel solution there is often added carbolic acid. That preparation is now superseded by colloidal iodine (Collosol Iodine 1:500), which can be sprayed through a glass or hard rubber atomizer.

One thing I would like to ask Dr. Brooke and that is about the use of suction. Some rhinologists condemn suction in sinus disease; but I think that most specialists in nose work approve

Chronic Multiple Osteoarthritis

I. M. LEAVY, M.D.
MONTEFIORE HOSPITAL
New York

The purpose of presenting these cases is to show our efforts at the hospital for the early rehabilitation and reeducation of these patients. Showing (1) the necessity for prompt institution of passive and active therapeutic exercises (2) and the intervention of surgical procedure to obtain the results of these therapeutic exercises. We offer nothing new in the way of treatment,



Case No. 1
S. G.—Both knees. Arthritic changes. Flexion and extension free.

nor do we expect to cure these patients, but we do prepare them to take up their duties in routine life. We try to rehabilitate and reeducate them.

It is understood, of course, that adjunct and other important therapeutic treatments are given when necessary, when applicable to each individual case. We refer to such treatments in medicine (salicylates, foreign proteins, sedatives, etc.); in surgery (removal of foci, the teeth, tonsils, etc.); orthopedic appliances (P. P. casts, braces, etc.); heat (diathermy, baking, baths, etc.). Our purpose is to institute the passive and active therapeutic exercises as early as it may be possible. These latter include the walking and stair apparatus—we have installed in our department what we call the stair apparatus, which is simply a short flight of low stairs with double banisters and with platform, that the patient may rest. The patient is instructed in walking up and down the stairs, as we have observed that patients have been able to walk on level floors for some time, and we were unable to further rehabilitate these patients until they could walk up or down the stairway. We also use mechanotherapy, including Zander apparatus, both motorized and non-motorized. These machines are adapted to increase range of motion in the joints of the upper and lower extremities, with facilities for gradually increasing muscular efforts by the additional weight attachments.

The passive and active therapeutic exercises referred to include:

Manual, passive, assistive, and resistive exercises.
Mechanotherapy—Walking apparatus and stair.
Zander—Motorized or passive.
Non-motorized or active.

The histories of the cases presented will be brief and only such matter relative to the present condition and treatment under consideration will be discussed here.

Case Presentations

CASE No. 1. S.G.—This patient is 33 years old and his history dates back to May, 1929, with pain starting in the right shoulder, the right knee, the left shoulder and the left knee. The pains were not severe enough to stop working. In August, 1929, the interphalangeal and metacarpophalangeal joints became swollen and

Case No. 1
S. G.—Left Knee. Arthritic changes with bone absorption. Flexion contraction.

Case No. 1
S. G.—Right knee. Arthritic change with bone absorption. Flexion contraction.

tender, which necessitated his discontinuing work. In September, 1929, he had a tonsillectomy. Three weeks later his condition was much worse, accompanied by chills and fever. All of the joints in the upper and lower extremities were involved and he became bedridden. In November, 1929, he was sent to Sydenham Hospital. There was some relief of the pain but the joints remained stiff and swollen. He was given salicylate therapy and one intravenous typhoid injection, with marked reactions. The stiffness in the joints diminished but he was still bedridden. In April, 1930, he was at home, chair-ridden, and after two or three weeks there was exacerbation of the joints and he became bedridden again.

In May, 1930, he was admitted to the Montefiore Hospital. Examination disclosed swelling, pain and tenderness with marked limitation of motion in the

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of suction. I generally use suction. I would like to ask Dr. Brooke if he uses suction. If not, why not; and, if he does, is it used before, after or during the treatment with diathermy?

DR. CHARLES R. BROOKE, closing—I was very glad to have Dr. Silvers mention electrocoagulation of the turbinates. I can only confirm his findings.

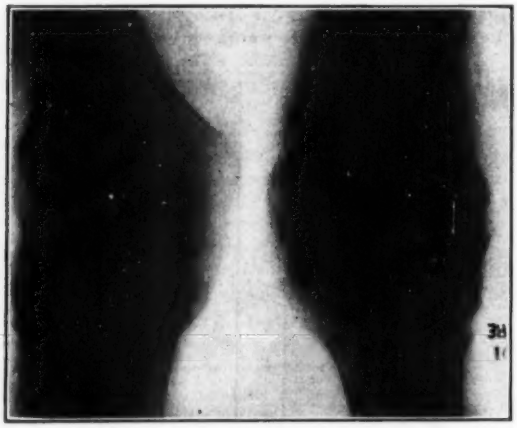
Allergic sinusitis is benefited by diathermy.

In reply to Dr. Hergert. I do not use suction nor do I approve of suction or irrigation. If used at all, it would be preferable after the diathermization.

shoulders, elbows, wrists, metacarpal and phalangeal joints, knees, ankles, tarsal and phalangeal joints of lower extremities. There was limitation of motion of both temporomandibular joints. The mouth could open to ¼ inch. On June 6th an *x*-ray report showed areas of absorption involving the tarsal and metatarsal bones and the femur, tibia and fibula and advanced arthritic changes in the left knee.

The physical therapy treatment given was 30 minutes in the light cabinet; effleurage to extremites; diathermy (active 2" square electrode) to temporomandibular joint (inactive 4" square electrode to cervical spine). He was also given exercises with the walking chair and on the stairs. Passive motion to all joints of the extremities emphasized. Also active exercises and mechanotherapy. Examination at the present time discloses almost full abduction of the shoulders, complete function of the elbows, limited flexion of the hands and wrists with practically complete extension, the fingers almost full flexion and complete extension. Knees, complete flexion and extension. He walks with a cane, unassisted on the level ground or stairway.

CASE II. J. B.—Another patient, 40 years old, whose



Case No. 2
J. B.—Left knee. Bony ankylosis, involving Femur, Patella and Tibia. Obliteration joint cleft. Marked flexion contraction. Right knee. Advanced arthritic changes. Marked flexion contraction

history dates back fifteen years. He started with a sore throat, followed by pain and tenderness in the right shoulder, then the right ankle, and the right phalanges. Nine months later he had a tonsillectomy. There was exacerbation of symptoms, then quiescence. Three months later the left elbow became involved and the left knee. A plaster of Paris cast was applied to the knee at the Ruptured and Crippled Hospital. The left knee became stiff. The patient returned to work. Eight years ago there was a recurrence and he became bedridden for six months.

He was admitted to the Montefiore Hospital on October 9, 1928, with chronic hypertrophic arthritis in the following joints: Left knee, complete bony ankylosis in flexion, fixed in extension at 115°. The right knee showed flexion deformity and fluid in the knee joint. There was spasticity of the muscles. Extension was limited to 115°, flexion to 80°. There was some luxation of the left elbow. The left hip showed arthritic changes. The lower lumbar spine showed arthritic changes with rigidity. The *x*-ray report on October 17, 1928, showed advanced arthritic changes in the shoulders with bone production. The left knee showed bony ankylosis, with obliteration of the joint cleft. The right knee showed arthritic changes. There was distortion of both elbow joints with advanced arthritic change.

The physical therapy given in October, 1928, was the light cabinet baking, with passive motion and massage of

Case No. 2
J. B.—Left knee. Bony ankylosis. Obliteration joint cleft. Marked flexion.

Case No. 2
J. B.—Right knee. Postoperative. Correction full extension.

all extremities. Mechanical therapy was given to all extremities. Walking was impossible because of flexion deformities. There were no results from the treatment. The treatments were then discontinued because of intercurrent disease, as follows:

In February, 1929, he developed acute submaxillary sinus. In April, 1930, a right facial palsy. In May, 1930, an acute suppurative adenitis in the left cervical region. In June, 1930, he developed an abscess on the left side of the neck. This was incised and drained.

On March 17, 1930, a left knee osteotomy was done and the knee corrected in extension. A hamstring tenotomy was done on the right knee, and this was very effective. *X*-ray reports following the operation showed a fracture of the lower end of the left femur, with inward displacement of the distal fragment. There were no gross pathological changes in the tibia or fibula.

The physical therapy treatment given was as follows: Baking and passive motion right knee. Walking exercises. Cast discarded in 4 weeks. Mechanotherapy.

Case No. 2
J. B.—Right Knee. Advanced arthritic changes. Marked flexion.

Case No. 2
J. B.—Postoperative. Fracture lower end femur. Knee fixed in extension.

Seven days following the operation the cast was split and we started passive motion while the patient was in bed. The cast was replaced at night. When able to leave the bed, we started walking exercises with the cast on.

This patient is now able to walk and stand unassisted.

He limps a little, favoring the right foot. There is a shortening of the right lower extremity. There is free flexion in the right knee and full extension. The left knee is ankylosed in extension. This patient's knees were completely flexed before treatments.

Case III. R. P.—This patient was a young woman

Case No. 3
R. P.—Postoperative. Correction left knee. Extension and flexion free.

Case No. 3
R. P.—Postoperative. Correction right knee. Extension and flexion free.

23 years of age. She was a factory worker. Seven years ago she had a pain and stiffness in the right wrist. A plaster of Paris cast was applied for three months. The wrist became rigid. This was followed by pain and stiffness in the left wrist. Two years ago there was an involvement of the left knee with pain and swelling. Three months later there was a pain in the right knee and swelling. One year ago there was involvement of the interphalangeal joints of the second and third fingers. She ran a temperature with each attack.

In October, 1929, she was admitted to the Montefiore Hospital. In both hands there was fusiform swelling of the interphalangeal joints. There was definite crepitation. There was slight flexion contraction at the second interphalangeal joint of the second, third and fourth fingers. In both knees there was marked swelling, heat

Case No. 3
R. P.—Left knee. Moderately advanced. Arthritic changes. Narrowing joint cleft. Flexion contraction.

Case No. 3
R. P.—Right knee. Moderately advanced arthritic changes. Narrowing joint cleft. Flexion contraction.

and tenderness, with limitation of flexion and extension. There was crepitation. Both wrists developed bony ankylosis and the joints were enlarged and inactive. The Wassermann and Kahn reactions showed 4-plus. The antiluetic treatment was given continuously.

X-ray reports on October 21, 1929, showed moderately advanced arthritic changes in the right and left knees, with slight amount of bone production and narrowing of joint cleft. The left ankle (metatarsophalangeal joints) showed arthritic changes. In the hands there were advanced arthritic changes with partial bony ankylosis of the lower ends of the radius, ulna and carpus. The sacroiliac joints and hips showed arthritic changes.

The orthopedic treatment given was the application of right and left caliper splints, with traction on both knees, but without appreciable results.

The physical therapy treatment consisted of the light cabinet with massage and passive motion to the hands, fingers and knees. Later, diathermy was applied to the knees. Mechanical therapy was also given.

This case is similar to the previous one in that the knees were completely flexed.

On May 20, 1930, an open operation was performed with bilateral tenotomy of the hamstrings. The ligaments were freed.

A pathological examination of the knee joints showed chronic arthritis with typical epithelial proliferation of the endothelium.

Physical therapy treatment was started seven to ten days after the operation while the patient was still in bed. The radiant lamp was used. Passive motion was given both knees. The cast was always replaced at night. When she came to the mechanical therapy department we started her walking on the level and up and down stairs. She is now able to stand and walk unassisted. There is extension of the knees to 180° and flexion of the knees to 90°.

I want to emphasize the particular importance of offering therapeutic exercises early and energetically.

In the matter of surgery. We have found that in a great many of these cases we have been unable to do anything with physical therapy, especially those with contractures. With surgery, however, a simple operation gives us an opportunity to rehabilitate and with the aid of physical therapy sends the patient out into life to earn a livelihood. The man previously exhibited is now attending a switchboard as night attendant, and the others will probably be prepared shortly to engage in light employment.

Discussion of Paper by Dr. M. I. Leavy

Dr. A. Bern Hirsh—Mr. President, I think that the whole meeting appreciates the pains Dr. Leavy has taken to give us this good report this evening and I want to congratulate him upon these cases.

May I again as a member of the Committee on Publication ask that Dr. Leavy supply the Committee with photographs of his X-ray plates and mark them for each of the cases so that when the report is published we can place the proper photograph with the suitable case.

Another suggestion is that possibly it might be well to detail the corrective exercises that were used for each of these cases, for that would be instructive. If the Doctor will specify the kinds of exercises used, that will add greatly to the report.

Dr. Joseph Henschel—In the cases reported, why was not a simple tenotomy performed?

Dr. Harold D. Corbusier—These cases are the bugbears of orthopedist and physical therapist. They involve more than simple physical therapy. I am glad the Doctor emphasized the fact that some of these cases require surgery. In the early stages there should, of course, be no necessity for tenotomy. Before resorting to surgery we should go into the matter very thoroughly.

The Doctor did not mention any other treatment besides physical therapy and surgery. We examine these cases with extreme care and try to find the focus of infection. We cannot always find this, but in many cases we do. In order to do that we have to have a blood culture made. That is extremely necessary. In treating arthritis we do not confine ourselves to orthopedic treatments. I feel we should treat the whole patient. Examinations of the blood and urine should be made, X-rays of the teeth taken, cultures made from every available source, whether suspected or not.

If we can get the patient in the early stages before surgery is necessary, there is nothing like the application of heat, and I mean especially deep heat. In giving exercises we should always apply heat first.

I am not at all keen about the Zander apparatus, although I have just returned from Europe where they use it a great deal. I do believe in active exercises, which I think are better than the Zander apparatus.

We should be careful not to fix the joint. The Doctor spoke of having the girl's wrist in a plaster cast for three months. I would not have put that wrist in a plaster cast at all. We should keep up graduated motion.

We should be very careful about using weight bearing for the lower extremities. They should have active exercises and heat. When I say heat, I mean diathermy. There is nothing to take its place in certain cases.

I want to congratulate Dr. Leavy on his report of the cases. I think these cases came out very well indeed.

Dr. K. G. Hansson—May I say just a word about physical therapy exercises. In explaining movements made by human beings it is necessary to go back to evolution. The coarse movements are probably what we inherited from our parents, while movements such as those of the fingers are lately acquired. In treating these patients, therefore, we make use of the so-called mass-movements. These exercises bring us back in the evolutionary scale. The whole upper extremity moves like one bone, as the wing of a bird. By increasing the scapular motion in a patient with ankylosis of the shoulder joint, elbow and wrist joint a certain usefulness is obtained, which is much appreciated by such an invalid. Therefore, if the patient suffers with arthritis in the upper part of the body you can start giving him exercises involving the shoulder and gradually working down, by using the shoulder girdle movement. The same is true in the lower extremities. If you have a case with complete ankylosis in knee, hip and ankle, you can teach him an entirely different type of exercise in walking, that is, to pivot on the heel.

I have lately tried treatments in a therapeutic pool of 85° to 95° F. It is too early to report any results but so far it is very encouraging.

I congratulate Dr. Leavy on his report. It shows a great deal of preparation.

Dr. Heinrich Wolf—The results, Dr. Leavy has shown, are really excellent. I can only attribute it to the fact that the patients have been in the hospital such a long time and that Dr. Leavy has at his disposal a large staff to give efficient treatments. Otherwise I cannot possibly understand how he could secure such good results. It is difficult to treat one arthritic joint, and if ten such joints have to be attended to, it takes just about ten times as long.

One thing has not been mentioned and that is the treating of patients of this type with sinusoidal stimulation. This procedure has a good effect in increasing the tonus, which so frequently is lost. This increase of the tonicity of the muscle has indirectly a good effect on the joint.

The use of heat in acute cases is not advisable. In our hospital we avoid heat in acute arthritis.

Dr. Joseph Henschel—I want to tell Dr. Wolf that I had the opportunity of working with Dr. Leavy. He has no physician helping him at all and his assistants, I believe, consist of two men and two women.

Dr. Leavy is certainly to be congratulated on making the lame walk. I think it is a beautiful presentation of the fact that more than physical therapy is required in the care of arthritis and that in some of these cases a surgeon must be called upon.

Dr. I. M. Leavy, closing—Dr. Hirsh asked about the exercises. I particularly refer to cases which have been operated. About seven or ten days after operation, when still in a cast, we had the cast split down and applied the radiant lamp to warm up the knee. Then as soon as possible we have the patient come down to the Physical Therapy Department, with the cast on if possible, and gradually and easily we teach him to stand. Then we have the suspension walking apparatus. We place the patient supported at the armpits and have him use his feet. Any patient who has been bedridden for months, perhaps for years, cannot easily be induced to use his feet. These patients have to be instructed. With the suspension apparatus they have utmost confidence. They cannot fall. Then they gradually go from one step to another. We have the stair apparatus where they are taught to walk up and down stairs. This apparatus was not purchased but was made in the hospital. All home made. All of the apparatus is just for the purpose of reeducating and rehabilitating.

The question as to why tenotomy is not sufficient. After the disease has persisted for some time the tendons have contracted and the ligaments and capsule are rigid and contracted and unless the job is done completely the tenotomy is worthless.

As to other forms of treatment, I mentioned earlier in my talk that medication is being given such as salicylates, foreign protein injections, sedatives, etc. Also that surgery was used, removal of foci, teeth, tonsils, etc.

We are not alone in accomplishing results such as these. There are others doing the same kind of work.

The question of Zander apparatus. At the Vanderbilt Clinic before the war we used Zander apparatus a great deal. It is not as applicable in acute cases as in chronic cases. This would apply also to other forms of apparatus. In the Zander apparatus, I have used both the motorized and the non-motorized.

In reference to putting the wrist in a cast. It was ankylosed before coming to us, the result of being put in a cast.

As to the question of weight bearing. In acute cases we would not use weight bearing. But the sooner you get them to use the feet, the sooner they get about.

We usually get the cases very late—when they are chronic. We have to treat from a chronic point of view. In the chronic types of cases we must resort to mechanical therapy.

As to active motion *vs.* passive motion. We give passive motion to start with, then gradually work to active motion. This usually works out very well. A great many cases are bedridden. Following operations particularly you must start with passive motion.

I have tried galvanism. Where there are contractures it is almost impossible to get any results.

The regular meeting was suspended for a few moments to permit the Society to be addressed by Dr. M. Y. Tsu, Director of Institut Franco-Chinois, Member of Central Executive Committee of the Nationalist Party, and former President of Canton University Medical College, who spoke partly in Chinese, the interpretation being given by Mr. Chih Meng, Associate Director of China Institute in America. Dr. Tsu is visiting in Amerca for a short time.

(Mr. Meng stated that he was not a physician and therefore feared he might not be able to interpret technically or correctly all the medical terms.)

It is a great pleasure which your President has extended to me in asking me to say some words on Physical Therapy to you tonight. Due to my limited knowledge of your English language I have asked Mr. Chih Meng to act as interpreter.

It is a great privilege to meet with such a distinguished company who specialize in physical therapy.

In taking up the question of physical therapy, it will not be necessary to take into consideration treatment by chemical or pharmaceutical methods.

I shall just state very briefly the traditional way China has been employing drugs and physical methods.

The one way in China is the same as elsewhere. The traditional way first has been the superstitious way and then the more scientific way. I will not have time to say anything about the traditional superstitious way nor the chemical method of treatment, but chiefly the physical therapy.

I might say that physical therapy has not been taken up by doctors and physicians, but by a special group of specialists. There are three methods greatly used. One is by the puncture method, one by massage and one by bleeding. The Chinese method is different from the European method of letting out the blood. The European way is to draw from the place letting out the most blood. The Chinese method is to draw from a vital point, not letting out much blood. One variety of this method is to scrape the spot with the dull edge, say, of a spoon and gradually bleed through the skin. Probably this is intended to make the place or location become more active. Another variety is to use the drawing power of fire in cups. While doing this, alcohol is sometimes employed. Briefly speaking, the puncture method is based on a study of over three hundred strategic points on the body. The punctures are made by a silver needle 10 to 12 centimeters long and at certain places are based on long experience. Sometimes the silver needle is heated by a certain dry plant, moss. There has been a case in which the Doctor made a puncture in the patient's skull.

So far I have briefly sketched the therapeutic meth-

ods or the methods of curing something. There is another method. That is to prevent disease. This method, in which I am especially interested, is a form of physical culture or physical exercises that was invented about a thousand years ago. This system is different from the modern system of exercises in that it does not require violent exercise, does not require violent breathing. It calls for only very gradual and very slow motion. This system in its motion follows the mechanics of the anatomy as well as the force of gravitation and in every motion exercises practically every muscle of the human body as well as the inner organs of the human body. All the motions in this system are curves and not straight lines. I am sorry that I am not able to demonstrate the system to you at present but later on if any of you are interested I shall communicate with you regarding it. This system is built not only on the ancient system but has incorporated in it the modern system of physical therapy in the human body, and cures as well as prevents disease.

The entire assemblage gave a rising vote of thanks to Dr. Tsu for his talk.

Discussion of Talk by Dr. Tsu

Dr. Harold D. Corbusier—I would suggest that we request Dr. Tsu to give us a short paper, supplementing this talk of his here tonight. I am interested in Dr. Tsu's talk, because thirty years ago I was privileged to be in China. I acted as an instructor to medical students at Tientsin. I also had the opportunity of treating many injured and wounded Chinese. We have often heard it said that there is no nationality as stoical as the Chinese. At a certain period we had to operate on a great many of them. They were serious operations, sometimes without an anaesthetic.

Dr. Tsu's talk was very interesting.

Dr. William Bierman—At some future date, if Dr. Tsu is still in America, I trust we may have the opportunity of having him show us these exercises in which he is interested. We want to thank Dr. Tsu for his talk on Ancient and Modern Methods in Physical Therapy.

Case Presentations

Heinrich F. Wolf, M.D.

Physical Therapy Department, Mt. Sinai Hospital

New York, N. Y.

a) Periostitis of styloid process of radius—I have observed, a good many times, a peculiar condition in the wrist, which seems to be a clinical entity. I call it a periostitis of the styloid process of the radius, though only in a few cases have I been able to demonstrate it by X-ray. This patient is a woman who is a cutter by trade. It has therefore been looked upon as an occupational disease. I have seen a few cases who have had the trouble in both wrists. Some cases may be due to a focal infection. The treatment is a very tedious one; it may take months to obtain a result. A very well known surgeon suffered from it. He used immobilization with some success.

I have found that we get results sometimes with diathermy, using small plates applied on both sides of the wrist. In this case diathermy had no effect. We changed to ionization. The patient is improving under this treatment. We would really not consider this an improvement except that we have treated her for some time. She has shown improvement only since we used ionization. When you examine her, be careful not to press too hard. A gentle pressure is sufficient.

b) Trigger finger—I have no doubt that you all know very well what a trigger finger is. To those who do not know I want to explain what the pathological basis is. We have in the palm a transversal ligament which holds the tendons in place. In these cases you will note that the patient can bend the finger when closing the hand. When he tries to open it, the affected finger is stuck and stretches with a jerk, and is therefore called trigger finger. If you put your finger on that particular tendon proximal to the ligament you will find that this part of the tendon is sensitive. You can feel, when the patient stretches the finger, that the button under your finger moves. In the beginning stage some pain is felt when that particular finger is bent, but only on full flexion does the symptom of a trigger finger manifest itself. This peculiar condition is most frequently to be found on the ring finger, then on the middle finger, then the little finger, the thumb and rarely on the index finger. One case of mine was operated and the button taken away. The patient recovered. A little later an identical condition appeared in the other hand, likewise in the little finger. He was cured by diathermy.

It can be definitely established that pressure on the tendon is often the cause of this tendon affection. For instance among golf players.

One man, whose occupation required an excessive use of his thumb, got it in that member. I found it in a colleague who leaned too much on his cane. As far as treatment is concerned, you can get almost certain results by the use of diathermy, placing the electrodes opposite to one another over the tendon, provided you get the case at the time when the inflammatory tissue has not changed into scar tissue yet. If not treated, the condition may continue for months. I have seen it last for years. If treated early, in the first few weeks, you can expect an immediate improvementt. I have seen a cure after a week. Sometimes after two or three weeks. In the older cases it is necessary to resort to surgical methods to obtain a rapid cure.

Discussion of Presentations of Dr. Wolf's Cases

Dr. Wm. Bierman—These were very interesting presentations and Dr. Wolf's complete description makes it difficult for much discussion.

Dr. Brooke explained that the two cases he had expected to present had been hindered from coming, one because he was getting married and the other because he was on night duty at the hospital. Dr. Brooke gave his reports, anyway, as per the following pages.

Hyperguanidemia in Tetany

In a patient with the clinical manifestations of tetany, Eugene F. Traut and Robert P. MacFate, Chicago (*Journal A. M. A.*, Jan. 24, 1931), found that the calcium of the blood was quantitatively always within normal limits. The guanidine bases in the blood were always increased. Either calcium or parathyroid extract-Collip controlled the attacks. Since hyperguanidinemia has been found in parathyroidectomized animals, they suggest that possibly its presence in human tetany has an etiology significance.

Report of Two Cases from the Reconstruction Hospital Unit of the Post-Graduate Hospital

1. Burn of Legs—Second Degree 2. Brachial Plexus Injury

HAROLD H. HERRING, M.D.
New York City

Mr. President, members of this society and guests of the evening:

The hour grows late and I do not want to trespass unduly on your time and patience. I will not speak about burns in general nor about nerve injuries and their signs and symptoms, but with your permission will proceed directly with the presentation of the two cases that I have the pleasure of showing you this evening.

The first of these is a young woman of eighteen who received an accidental gasoline burn of both legs and her right elbow on February 22, 1930. She was admitted to the Reconstruction Hospital within a few hours of the accident and received her emergency treatment, consisting of débridement of the loose burned skin and of several blebs and the application of moist dressings of 10 per cent sodium bicarbonate solution to all injured surfaces. Her admission note states that she presented the following condition:

Left leg—dorsal and planter region of foot as well as inner and posterior aspect of leg, covered by very large blebs which were opened, with escape of serum. Right foot—dorsum and side had several small blebs which were opened. Right arm—burns over elbow region. Second degree burns of left leg and foot, right foot and right elbow.

At the end of five days olive oil and camphor dressings replaced the sodium bicarbonate ones and short daily treatments of ultra-violet radiation were started. The mercury-vapor-in-quartz air cooled generator was used, the initial dose being 30 seconds at a 30-inch skin-to-burner distance. This dose was increased by 30 seconds every other day. Three weeks after her admission to the hospital the whirlpool bath at 110 degrees for twenty minutes was used daily and light massage above and below the lesions was started. She improved rapidly, epithelization proceeded well and scar or tendo Achillis contractures were prevented by the use of massage and therapeutic exercise. By the middle of July she had only one small unhealed area about three centimeters in diameter and her scar was soft and pliable. As you see, she has no puckering, no keloid, no limitation of motion in foot, ankle or knee. The recovery is quite satisfactory.

The second case is one of a man forty-eight years old, a foreman, who was injured on January 30th, 1930, by a falling rock. Some large pieces struck him on his head and left shoulder, knocking him down and rendering him unconscious for about half an hour. He was removed to a hospital where his arm was set under an anesthetic and put up in plaster. For about a week his hand and arm were swollen, dark colored and numb, which improved somewhat when the splints were changed at the end of one week. The arm at this time was put up with the arm at the side of the body, forearm flexed ninety degrees. About three months after his inqury he appeared at the Reconstruction Hospital complaining of inability to use his arm, in spite of the fact that he had had some light treatment and had been advised to use it all that he could. Upon examination, April 23rd, 1930, he showed the following local condition: "An atrophy of the muscles about the left scapular region, deltoid region, arm, forearm and hand. There is subluxation of the head of the humerus. There is firm bony union at fracture of left humerus. There is no motion in left shoulder, and limitation of motion in left elbow. Patient is unable to hyper-extend hand at wrist. There is very little motion in hand, and inability to flex and extend fingers. Joints of fingers and hand are enlarged. There is swelling at wrist and elbow joint."

The neurological examination made by Dr. Peterson on April 25th, 1930, was as follows: "Examination reveals an atrophy of the shoulder muscles and the muscles of the upper arm, also of the lower arm, but there is slight flexion and extension of the fingers. The muscles of the thenar group are very slightly atrophied, if any. There is limitation of motion of the short adductor. Sensory examination reveals loss of sensation over the upper arm and forearm and the hand in the musculospiral distribution. The ulnar and median distributions are only slightly involved, if any, and since these two are from the lower segments of the cervical cord, consequently the lower part of the brachial plexus, it would seem that the lesion was one affecting the outer and middle cord of the plexus. General neurological examination is otherwise negative. Cranial nerves are normal. Superficial and deep reflexes are normal and no abnormal reflexes. This would rule out a cervical spine lesion through fracture or a pulling out of the cords, in which case we expect some pyramidal tract signs. There is no evidence of sympathetic involvement. In spite of this I would recommend an X-ray of cervical spine."

On April 30th, 1930, a muscle and nerve test was done which corroborated Dr. Peterson's findings as to the nerve injury. The arm was put in an airplane splint of perforated metal and he was allowed about the ward.

He then received radiant heat and light to the shoulder and arm followed by massage. Every other day he had stimulation to the muscles and nerves by slow galvanic sinusoidal current and occasionally by the interrupted galvanic.

At the end of two months the head of the humerus had returned to the glenoid cavity and he could abduct the arm about 30 degrees. He could flex his fingers slightly. At this time the whirlpool bath to his forearm and hand at 112 degrees for twenty minutes daily was added to his treatment prescription.

At the end of five months he showed increased motion at his finger joints and the shoulder group of muscles were all functioning except the deltoid. Slight improvement in the action of the biceps brachii, but very little power in the extensors of the elbow and wrist.

You may now see for yourselves how much improvement he has made in the six months that he has been under treatment. In a case such as this even though the prognosis is poor and the outlook bad for a good recovery I believe that continued painstaking treatment with plenty of patience and perseverance will bring back enough function to make the effort well worth while.

I thank you.

115 East 61st Street.

Discussion of Dr. Herring's Paper

Dr. Norman E. Titus—Outside of the Beekman Street Hospital, five boys found a can of calcium carbide. They threw matches in to see what would happen. All five were brought into the hospital badly burned. On one of these boys I used nothing but the radiant light. He responded very quickly to this treatment and was discharged long before the other boys. Since then the radiant light has been used in the Beekman Street Hospital for cases of burns. Sometimes these patients have to be treated for six, eight and even fourteen weeks. The patients are supported on blocks, with four or five lights, covered by mosquito netting so that any flies will be kept away, and there is a continuous circulation of air, which is very important in radiant heat. This is the treatment used at the Beekman Street Hospital ever since the five boys were brought in.

In one burn case we tried to use the mercury arc lamp and gave a one-half hour dose and the burn glazed over in twenty-four hours. It was covered with a beautiful glazed surface. After forty-eight hours it broke down into one mass of slough and the case went very bad. We cut down the treatment and now the usual procedure is to use the mercury arc lamp once a week, giving a 20-inch, 10-seconds dose.

In the case of brachial plexus injury, I have obtained very good results by the continued use of interrupted galvanism. I feel that Dr. Herring's case has done extremely well and if Dr. Herring will show him again next spring we will be able to see the progress made. I feel that the best results may be obtained by interrupted galvanism to the muscles, the galvanic bath, and individual motor point stimulation. For the benefit of those who have not done any of this work I would say that the absolute maximum dose is the minimum dose which will stimulate the normal muscle on the other side. Never work for visual results.

Dr. Farel Jouard—It would be interesting to know if there was reaction of degeneration. Was there degeneration of the deltoid?

Dr. Emilio L. Hergert—I would like to ask Dr. Herring if he did anything to remove that unsightly scar on the girl's leg, as ionization, X-ray or what not. Something should be done, if possible, to do away with the scar.

Dr. Harold D. Corbusier—One thing I would like to suggest. I have had quite a number of cases of that sort and we always keep them a long time in the airplane splint and give them exercises, with muscles supported.

Dr. Herring, closing—I want to thank all of you, gentlemen, for your very kindly remarks.

As to the galvanic bath, we have not used it, but I think we might add it to our treatment and perhaps get additional help for him from that.

I am sorry I cannot give the Doctor a detailed report on the individual muscle and nerve test, but only one showed a complete reaction of degeneration and that was the deltoid. On this basis, we proceeded to do something for him. I prefer to try to do something, even for those cases showing a complete reaction of degeneration, inasmuch as some of them come back, in spite of a poor prognosis.

As regards the resultant scar, the patient is satisfied to be back at some gainful work and has not yet reported to her own physician who sent her to us, so that I cannot say just what will be done about the scar.

The Hospital and the Medical Profession

(Concluded from page 137)

with their background. Too often we find young men who have wandered into the practice of medicine not because of any special aptitude, nor because of any special interest, but because in their aimless search for a method of making a livelihood, medicine seemed as likely as the next alternative. Despite the rigorous standards of the medical colleges there are still many students who, though they slip by and meet the academic requirements, are unsuited for the profession. How are we to meet this situation? This is a point which I should like to see more often discussed at medical meetings. Its importance is obvious.

The path through which physicians and organized medicine will have to pass in the next few years is strewn with difficulties. The complicated and chaotic character of the country will mean, as far as organized medicine is concerned, the introduction of additional factors of a confusing nature. It will require courage and sustainingly brilliant leadership to keep medicine free of the influence of politicians and dogmatic social agencies which, after cursory surveys, will come with benign and hopeless panaceas. The problem will be, not only to keep them off, but to paralyze their effectiveness by demonstrations of concerted intelligent activities, revealing not only that physicians have a sense of social direction, but a realization that the best interests of the community are tied up with their own well being.

The history of medicine gives us adequate assurance that, in the past, medical men have extricated themselves from more puzzling situations. We know that this can be accomplished today—but only by sincerity in our quest of the truth, frankness in our realization of our failings, and unstinting cooperation in bringing about the changes without which we cannot forge ahead.

Pyelonephritis in Pregnancy

D. K. Rose and Paul R. Rollins, St. Louis (*Journal A. M. A.*, Jan. 24, 1931), have taken cystometrograms before and after delivery and, in some instances, during delivery in the fifteen cases reported here. Thirteen of the patients were primiparas and two were multiparas. Excepting the cases of one primipara and the two multiparas, who had no urinary retention, all cases followed were those showing postpartum retention. Of the twelve cases showing retention, nine were due to a physiologic block of the nervus pudendus caused by pressure of the child's head on this nerve. The authors believe that this nerve block cannot be ascribed to morphine-scopolamine, as the diminished sensation lasts as long as thirteen days. Forceps were applied in all but two of the fifteen cases reported. The patients in those two cases had a brief labor. While neither showed retention, the percentage is so small and the use of forceps so general that the authors do not believe that their use is ordinarily a factor. Episiotomy was found not to be a constant factor, as it was done in two of the cases in which there was no postpartum retention; and yet in certain instances this operation may have some influence, particularly on the sympathetic overbalance type of postpartum retention. They base this conclusion on the fact that the surface area cut is supplied, or at least reflexly influenced, by the same spinal cord segment as the one that supplies autonomic bladder control and, if this reflex is an inhibitory one to the parasympathetics, there is a sympathetic overbalance. In accordance with our present knowledge of bladder innervation, it is the sympathetics, through the inferior mesenteric ganglion, which, on stimulation, dilate the bladder and are placed in control as a result of such changed innervation. Another possible effect of episiotomy is that the operation may make it painful to initiate voiding by depressing the perineum, which is closely associated with the voluntary initial movement of urination. In this series there were three sympathetic overbalance types of retention. The principal factor in the temporary nervus pudendus block is not the total duration of labor but rather the length of time the child's head rests on the pelvic floor. According to the relative shape and size of the head to that of the pelvic outlet, it is in some cases in a position to sustain an increased pressure on the pudic nerve at either the tuberosity of the ischium or under the symphysis pubis, or at both of these points. Slower deliveries with greater intrapelvic pressure and abdominal and pelvic muscle resistance are the factors causing more frequent nerve blocks in delivery in primiparas than in multiparas. There is no reason why the two neurogenic factors (1) presure nerve block, nervus pudendus, and (2) sympathetic overbalance or reflex mechanism, cannot coexist, one to a greater extent than the other.

Bile as An Antigen in Serum Diagnosis of Syphilis*

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In the light of the investigations of Marie and Levaditi (1), the original concept that the Wassermann phenomenon was a true antigen-antibody reaction was abandoned in 1907. Since then, plain alcoholic and cholesterinized extracts of normal organs—instead of similar extracts of syphilitic organs—have been used as antigens in the complement-fixation test for syphilis. Noguchi (2) added considerably to the knowledge of the subject by explaining that these complement-fixing extracts owe their antigenic principle to acetone-insoluble ingredients, lipoids, such as oleates, lecithin and cholesterol (3).

One of the substances containing the mentioned lipoids is bile. Its use *in toto* as antigen in the Wassermann reaction has been recently suggested by Michaelides (4) and Fattovich (5), while Castellino (6) has used it in flocculation tests for syphilis. In the present investigation plain alcoholic and cholesterinized extracts of bile were used.

In order to avoid probable errors resulting from individual variations, the bile of eight animals, four sheep and four oxen, was collected and treated separately. After being filtered and autoclaved at 120° C. for 15 minutes, aqueous solutions were made from each specimen and remaining portions were dried separately.

From the dried material alcoholic extracts were made in the usual proportions, 1-10, and a portion of each extract was later sensitized by the addition of cholesterin, as is usually done with extracts of normal organs (7). The following tests were then made using the aqueous solutions, plain alcoholic and cholesterinized extracts:

1—Test for hemolytic activity;
2—Test for anticomplementary properties;
3—Test for antigenic properties;
4—Antigen titration.

The aqueous solutions as well as the alcoholic and cholesterinized extracts of ox-bile gave satisfactory results, meeting the requirements of an antigen. They possessed sufficient antigenic properties, were not hemolytic, and showed no anticomplementary action in four times the amount of antigen sufficient to give a four-plus reaction with a known four-plus, luetic serum.

In view of the fact that several errors have been reported to result from the use of antisheep hemolysin (8) with corpuscles varying in resistance to hemolysins (9, 10), the corpuscles of a variety of sheep were tested before use, but no appreciable difference was found. The ox-bile was also tested for hemolytic activity with ox erythrocytes, with negative results. On the other hand, the sheep bile was hemolytic not only to sheep red-blood-corpuscles, but also to suspensions of ox red blood cells. For that reason sheep bile was not used as antigen in the comparative tests with known sera, but was eliminated as unsatisfactory.

Both the alcoholic and cholesterinized extracts of ox-bile showed an atigenic power about equal to that of alcoholic or cholesterinized extracts of normal organs, respectively; one unit of antigen was contained in a dilution 1 to 25 of the alcoholic extract and 1 to 90 of the cholesterinized extract of ox-bile. These dilutions, which remain constant in titer to date, were used in 125 comparative tests with known normal, one-plus, two-plus, three-plus and four-plus sera and with negative and four-plus specimens of cerebrospinal fluids.

The normal, three-plus and four-plus sera gave similar, indeed identical, results with the alcoholic and cholesterinized extracts of ox-bile as with similar extracts of beef's heart. Of the 25 one-plus sera, two gave a negative reaction with the bile antigen, while of the 25 two-plus sera one gave a negative reaction and six a one-plus reaction. The negative and four-plus known specimens of cerebrospinal fluid also gave uniform reactions with the bile and control antigens.

In conclusion, it was deduced from the results of this investigation that:

1.—Ox-bile possesses the antigenic principle common to extracts of normal organs. It can be used, therefore, as an antigen in the Wassermann test for syphilis.

2.—With normal and luetic sera and cerebrospinal fluid aqueous solutions, plain alcoholic and cholesterinized extracts of ox-bile are equally reactive as Wassermann antigens as similar extracts of normal organs.

3.—Sheep bile is hemolytic to ox and sheep red blood-corpuscles and cannot be used, therefore, as antigen in the Wassermann reaction, at least when the antisheep hemolytic system is used.

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Intrinsic Carbohydrate Metabolism of Skin

In a preliminary report of experimental studies, Donald M. Pillsbury, Philadelphia (*Journal A. M. A.*, Feb. 7, 1931), states that lactic acid, an important product of carbohydrate metabolism, is normally present in the skin. Lactic acid formation in vitro is a consistently demonstrable finding in normal skin, except when the skin has been previously frozen. Decreased oxygen tension has no significant effect on in vitro lactic acid formation by the skin. In the presence of dextrose in the incubating medium, especially in phosphate buffer solution, lactic acid formation is increased. The skin of animals previously injected with dextrose forms lactic acid in vitro in increased amounts. The lactic acid level of skin tends to be low in starved animals and higher in well fed animals.

Suggestions to Mothers in the Care and Feeding of Their Children

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General Care

BEFORE THE BABY IS BORN:—Healthy parents usually beget healthy children. A baby has within itself the physical and mental characteristics of many generations past. The condition of the mother during pregnancy must be at its best. She must have wholesome food and plenty of physical and mental rest. She should indulge in the nobler and finer activities of life. While maternal impressions of a physical nature have evidently no effect upon the unborn, esthetic and cultural impressions will cause a favorable environmental influence on the new-born. Some babies are born with physical or mental deformities. These deformities are, in some cases, due to the ill health of the parents; in others, the reasons for such abnormalities are beyond the ken of men. At birth, the best obstetrical care must be given to mother and child. After the baby is born the trials and tribulations of infancy and childhood begin, and the mother must give them her utmost care and attention.

NURSERY:—A large sunny room should be selected for the baby. The room must be kept clean, the furnishings neat and simple, and the temperature between 68 and 70 degrees F. The nursery should be thoroughly aired every day by throwing the windows wide open, the baby being removed meanwhile to another room. After the baby is a month old, the windows in the nursery should always be kept partly open.

OUTDOOR AIRING:—In summer, a baby may be taken out when two weeks old. In spring and fall, when it is a month old. In winter, it may be taken out on pleasant days when two months of age. When extremely cold, damp or windy, a baby should be kept indoors. The best time for outdoor airing is in the morning and late in the afternoon during the hot weather; in moderate or cold weather during midday hours. Babies must always be dressed according to the climate and should be protected from strong winds and strong sunlight.

BATHING:—After the cord has come off. and the baby is a week or ten days old, it should receive a daily bath, preferably at night. For this purpose the room should be made warm and the temperature of the water should be between 95 and 98 degrees F. Plain water, castile soap and a soft wash cloth are the only requisites for the daily bath. After bathing, the skin should be quickly dried and powdered. Care should be taken that the folds of the skin are dry. The use of olive oil on the baby's skin after bathing is of doubtful or no value and should better be omitted. No bath should be given immediately after feeding. Feeble infants and those who are acutely sick or suffering from a cold or certain skin diseases must not be bathed.

EYES, MOUTH, TEETH, GENITAL ORGANS AND SKIN: The eyes and mouth should be gently washed daily with absorbent cotton dipped in tepid boric acid solution. If there is pus in the eyes, boric acid solution should be frequently applied. If the condition is not promptly relieved, a physician must be consulted. Whitish flakes or sores in the mouth, on the tongue or gums should be frequently washed with a solution of borax and bicarbonate of soda. The primary teeth must be cleaned twice daily with a soft cloth and tepid water. The genital organs should be kept clean. Napkins must be frequently changed. The baby's skin must always be clean and dry. No strong soap should be used. If chafing occurs it should be treated with zinc oxide ointment and some good dusting powder.

CLOTHING:—It is important that the baby's clothing should be light, warm, non-irritating to the skin and made to fit the body. When tight it interferes with breathing, when too loose it is thrown into folds and causes much discomfort. If pins are used, care should be taken that they do not irritate or injure the baby. The chest should be well covered with a woolen shirt. Stockinet or soft flannel may be used for diapers. An abdominal band snugly applied should be worn for the first six months. Undernourished infants and those subject to colds or diarrhea should wear an abdominal band for a longer time. The outer garments must be changed according to weather conditions. When indoors, too warm clothing should be avoided.

SLEEP:—Very young infants sleep almost all the time. Older infants should be trained to sleep when put into the crib. Shaking and rocking are bad for the baby. No infant should be allowed to sleep with its mother or fall asleep on the breast or with a nipple in its mouth. A quiet, dark, warm room, a comfortable crib, a dry napkin and a satisfied hunger will put a baby to sleep. Sleeplessness is due to a too cold or a too warm room, hunger, overfeeding, indigestion, or other discomforts.

EXERCISE:—Every baby must be made to exercise. The position of the baby in the crib should be frequently changed. It should be carried in the arms for ten or fifteen minutes, three or four times a day. A baby should be allowed to kick its legs and move its arms freely. A little crying is beneficial to the lungs. Older babies may be put on a soft bed and given an opportunity to roll and tumble at will.

PROPER HABITS:—Infants and young children must be trained in regular and proper habits. Regular hours of feeding and sleeping are essential. Babies can be trained to evacuate the bladder and the bowels at regular times of the day. With intelligent training a baby will be able to indicate its desires by the end of the first year. Sucking of the fingers, toes or pacifiers is a very bad habit and should not be allowed.

CRYING:—Mothers frequently complain that their babies cry constantly. Unusual restlessness and crying are commonly due to too much food, unsuitable food, indigestion, abdominal pain, earache or nervous irritability. To cure these annoying conditions the food should be made to fit the baby's need and digestion. The abdomen and feet of the baby must be kept warm. Proper attention to the bowels is essential. The baby should be occasionally picked up and held in the upright position. When necessary an enema should be given, consisting of a glass of warm water in which a ¼ tea-

spoonful of table-salt has been dissolved. A careful examination will disclose the source of the trouble which must be corrected.

VOMITING:—When a baby's stomach is overfilled it will occasionally spill over and the baby will bring up a little of the breast or bottle feeding. If the baby is well and gaining in weight no attention should be paid to the vomiting. Frequent vomiting with loss in weight is usually due to improper food, overfeeding, frequent feeding, rapid feeding or to rocking the baby immediately after feeding. Proper food at regular hours will control the vomiting. Projectile vomiting in early infancy may be the result of some obstruction in the stomach or bowels and should receive immediate attention. When the baby has fever, vomiting may be a sign of the onset of some illness.

CONSTIPATION:—A baby's bowels should move once or twice a day. Slight constipation is not uncommon in babies and should occasion no worry. When constipation becomes habitual and causes restlessness it must be corrected. To overcome constipation the food must be made to act on the bowels by adding milk sugar, malt sugar, cereals or other suitable semisolid or solid food. Water must be given freely. When necessary a mild laxative should be used. Extreme constipation may be due to certain intestinal abnormalities or constitutional disorders.

DIARRHEA:—Frequent bowel movement occasionally occurs in apparently healthy infants. Some babies move their bowels each time they are put on the breast or the bottle, others have frequent bowel movement at irregular times. This condition must not be neglected. The diet should be corrected, the intervals between feeding lengthened, and boiled warm water given before each feeding. When diarrhea persists it must receive medical attention.

COLDS:—Infants take colds from overheated rooms, from too heavy clothes, from insufficient air, from exposure to draughts and winds and from contact with people who have colds. Rickets, malnutrition, large tonsils and adenoids predispose to colds. All these must be avoided or remedied. A clean, airy room, suitable clothes, proper feeding, regular bowel action and a daily bath will prevent many colds.

KISSING:—Many serious diseases are frequently communicated to infants and children through kissing. No strangers should be permitted to kiss the baby. Parents and others in the family when free from colds and other diseases may kiss the baby on the cheek or the forehead, never on the mouth.

VACCINATION:—Every baby must be vaccinated when it is about six months old. This will protect the baby against smallpox. Weak or undernourished infants should be vaccinated when nine months or a year old. Should the vaccination not take the first time, the baby should be revaccinated within a month or two. The arm or the leg may be chosen for the purpose.

PREVENTION AGAINST DIPHTHERIA:—At one year of age every baby should receive the toxin-antitoxin injections against diphtheria. It is harmless and will protect in the majority of cases. If desired, the Schick test may be given and if the baby is found immune to diphtheria the toxin-antitoxin injections are not necessary.

Weight, Growth and Development

WEIGHT:—During the first year a baby should be weighed every week or two. It should gain from one to two pounds a month. At three months a baby should weigh about twelve pounds, at six months sixteen pounds, at nine months nineteen pounds and at one year twenty-one pounds. At two years twenty-seven pounds. At three years thirty-three pounds. At four years thirty-seven pounds. At five years forty-two pounds. When a baby does not gain for a week or two there is no cause for alarm. It will probably make up during the next two weeks. Failure to gain for several weeks or a loss in weight means that there is something wrong either with the food or with the baby. Overweight is not desirable.

HEIGHT:—At birth the average height of a baby is twenty-one inches. At one year it is twenty-nine inches. At two years thirty-three inches. At three years thirty-five inches. At four years thirty-eight inches. At five years forty-two inches. Insufficient gain in height is usually due to some disease or to a faulty diet.

CLOSING OF THE FONTANELS:—The posterior fontanel is commonly closed by the third month. The anterior fontanel should be closed at eighteen months. Occasionally it is open till two years of age. Too early or too late closing of the fontanels is abnormal.

DEVELOPMENT:—A normal baby holds up the head at four months of age, sits up at eight months, stands up at twelve months and walks at fourteen months. Slight delay frequently occurs and is no sign of abnormality. Unusual delay should be investigated.

TALK:—A baby usually pronounces single words at one year of age and talks short sentences at two years. It should be able to talk clearly at three years of age. Inability to talk at the proper age indicates some abnormality of the speaking or hearing mechanism or of the nervous system.

TEETHING:—Mothers find it convenient to ascribe almost every disease of childhood to teething. Coughs, colds, bad bowels, earaches and many other common diseases of infancy are frequently but erroneously traced to teething. A careful examination will show that teething is not the cause of these ailments. Teething is not a disease. It is a normal process. A healthy baby goes through the period of dentition without any trouble. Occasionally a baby will be cross, fretful and indisposed for a few days before the eruption of a tooth. Difficult teething, delayed teething and poor teeth are all due to some underlying disease or disorder in the baby. Dentition begins at six months of age. At one year of age a baby usually has six teeth, at two years about sixteen teeth, at three years it has its first full set, that is, twenty teeth.

Food and Feeding of Infants

MOTHER'S MILK:—Milk from a healthy mother is the natural and best food for her infant. The first three months of life are the most important for breast feeding. When possible the infant should be kept on the breast for a longer time. Breast fed babies are healthier than bottle fed babies. More bottle fed babies die during the first year than breast fed babies.

NURSING HOURS:—During the first three months of life a baby should be nursed for 20 minutes every 3 hours: at 6, 9, 12, 3, 6, 10 and at 2 o'clock at night. From the third to the sixth month every 3½ hours: at 6, 9:30, 1, 4:30, 8 and 11:30. No night feeding. After the sixth month a baby should be nursed every 4 hours: at 6, 10, 2, 6, and 10. One or both breasts may be given at a nursing. The nipples should be washed with warm water or warm boric acid solution before and after each nursing. Orange juice, cereal, zwieback and vegetables should be gradually added.

SIGNS OF HUNGER:—When a baby does not get sufficient breast milk it will not gain in weight or will lose

weight. It is usually unhappy, fretful, irritable and sleeps poorly. It may pull on the breast for a long time or may take the breast for only a few minutes and drop it with apparent dissatisfaction. Under these circumstances the baby should be nursed for a few minutes and a bottle given immediately after, or the breast and bottle may be given alternately.

SYMPTOMS OF INDIGESTION:—Indigestion causes the baby much discomfort. It cries a great deal and sleeps very little. There is abdominal distension, occasional vomiting, colicky pains, constipation, or frequent loose, green bowel movements. The baby loses weight and looks unhappy. In many cases, mothers mistake a baby's crying from indigestion for hunger and they give more food, which may quiet the baby for a while but soon makes matters worse.

NURSING DURING MENSTRUATION:—During the menstrual periods the breast milk is usually poor in quality or inadequate in quantity and the baby is frequently affected either through hunger or indigestion. It is well to feed the baby partly or wholly on the bottle for a few days. When necessary the baby should be weaned.

SUCCESSFUL NURSING:—The mother should have a simple and generous diet; three regular meals a day. She may take almost any food she is accustomed to, and plenty of fluids. Rich and spicy foods, sour fruits, and alcoholic stimulants are better avoided. A simple and natural life, outdoor exercises in fine weather, proper bowel action, restful nights and freedom from worry and excitement are essential to healthful and proper nursing. The hours of nursing must be regular and the breasts completely emptied.

Weaning

WEANING FROM THE BREAST:—No baby should be taken off the breast during the first few months of infancy because of insufficient milk or other reasons without a thorough trial and proper investigation. Mother's milk is essential to the health and the development of her infant. No infant should be deprived of mother's milk except when the mother is seriously ill, or is pregnant or her milk has been definitely found to disagree with the baby. When the milk is poor in quality or insufficient in quantity, the mother's general health and diet should be improved and the baby given additional feedings from a bottle. Cows' milk should be given properly diluted and sugar added.

THE PROPER AGE WHEN THE BABY SHOULD BE WEANED:—The time for weaning is generally between eight and ten months of age. In summer, or when the baby is ill, it is advisable to continue nursing a little longer. Weaning should be gradual. When an infant on the breast is 4 or 5 months old it should receive one bottle feeding, later two bottle feedings may be given. Breast feedings should be gradually replaced by bottle feedings. Orange juice, well cooked cereals, vegetables and zwieback should be given during the later months of nursing.

FEEDING AFTER WEANING:—Care should be taken to give the baby the proper food for its age and condition. Cows' milk must be given at regular hours. Fruit juices, cereals, vegetables, zwieback, toast, beef broth, chicken soup and a soft-boiled egg should be gradually added.

Bottle Feeding

COWS' MILK:—If for any reason a baby is deprived of mother's milk, the next best food is fresh, clean cows' milk diluted with water and sugar added. The best milk possible should be obtained and kept on ice. The bottles, nipples and everything that is used in preparing the bottles must be kept absolutely clean. The milk should be pasteurized or boiled and served warm.

AMOUNT OF FOOD:—The entire quantity of food for the 24 hours and the amount at each feeding depend upon the age, weight, activity and digestion of the baby. As a general rule a baby should receive at each feeding as many ounces of food plus one as it is months old. More than eight ounces at a feeding is not desirable. This should be multiplied by the number of feedings for the 24 hours to obtain the total amount of food the baby will take in the 24 hours. Care must be taken that the food should contain one and a half ounces of milk for each pound of body weight for the 24 hours. The milk must be diluted with water, one part milk and one part water, two parts milk and one part water or three parts milk and one part water. Cane sugar, milk sugar, or malt sugar, a tablespoonful to every 10 ounces of food, should always be added. Occasionally more sugar is required. The food for the 24 hours should be divided in 8, 7, 6, or 5 bottles according to the intervals of feeding, which should be every 3, 3½ or 4 hours. The entire amount of food, the amount at each feeding, the hours of feeding and the proper modification of the food must be carefully determined for each individual baby. A baby's feeding must be changed at least every month. Dried milk, condensed milk or evaporated milk may be used occasionally instead of fresh cows' milk. As a general rule, however, they are not necessary.

OTHER FOODS:—Beginning with the 5th or 6th month, cereals and zwieback should be added to the bottle feedings. Later vegetables, chicken soup, beef broth, and soft-boiled egg may be added to the diet. Orange juice and cod-liver oil are essential in bottle-fed babies. They are also of benefit in the breast-fed. Viosterol may be given but it should not replace cod-liver oil.

Care and Feeding of Older Children

DEVELOPMENT:—After the first year and all through childhood, the weight, height, general health and disposition of every child must be carefully watched. Failure to gain in weight and height or any abnormal physical or mental development must receive serious consideration.

DIET:—A quart of milk a day should continue to be taken. The child should receive three regular meals a day consisting of bread, cereals, vegetables, fruits, eggs, butter, meat, fish and various desserts. No food should be given between meals. Water may be given freely. Strawberries, huckleberries, raspberries, plums, cherries, grapefruits and melons are specially valuable in the diet of children because they contain certain salts which are antirheumatic.

SYMPTOMS AND CAUSES OF MALNUTRITION:—An undernourished child is underweight, nervous, irritable, tires easily, sleeps poorly, is inattentive and unable to concentrate on play or school work. The causes of malnutrition are: poor or insufficient food, irregular meal hours, excessive physical or mental activity, too little sleep, bad ventilation, bad teeth or ill health. In each case the conditions must be carefully studied and corrected by rest, proper food, hygienic care and medical attention.

OVERWEIGHT:—Most overweight children come from overweight parents; others eat too much and play too little. These children should be made to eat less, especially of fats, sweets, potatoes, cereals, cakes and pies. They should indulge in all activities, walk a great deal and play hard. In some children overweight is due to

a glandular disorder which should be treated medically.

GOOD HABITS:—Children can be trained in good habits which will lead to better health and happiness. Proper eating habits are essential. A child should eat only the food suitable for its age and at regular hours. No food should be taken between meals. Water may be taken freely. An effort should be made to move the bowels regularly. The face and hands must always be clean. Daily brushing of the teeth is important. A full warm bath should be taken at least twice a week. Early to bed and out-of-door play are fine habits.

BAD HABITS:—Eating all kinds of food at any hour. Some children eat dirt, paper, plaster, wood or anything they can lay their hands on; this is a dangerous habit. Masturbation is a pernicious habit and must be broken up as soon as detected. Irregular bowel action, neglect of the teeth, uncleanliness, coughing and sneezing without covering the mouth and nose, and spitting carelessly, are bad habits. Jerking of the head, shrugging of the shoulders, twisting of the hands, blinking of the eyes and biting of the finger nails are injurious habits. Bad manners, impulsive temper, and neglect of personal appearance are undesirable habits.

Minor Ailments

TEETHING:—As previously stated, teething is not a disease. When a child is ill during the period of dentition the trouble is due to something else and not to the teeth. Occasionally, before the eruption of teeth, the gums become slightly swollen and painful and the child feels uncomfortable. This, however, is never the cause of the many ailments which mothers and grandmothers attribute to teething. The temporary as well as the permanent teeth should be kept in good condition.

TONSILLITIS:—This is a common disease in children. Care should be taken not to mistake diphtheria for tonsillitis. A child with tonsillitis should be put to bed and given a light diet, plenty of water and a mild laxative. The throat must be frequently gargled or sprayed with warm boric acid solution. A 10-per cent argyrol solution may be applied to the tonsils. Wet cold compresses to the neck are not necessary. Tonsils must not be removed unnecessarily.

COLDS:—A cold or the grippe is a common disorder in children. The treatment consists of rest in bed, a light diet, a mild laxative, warm drinks and a half tablet of aspirin twice or three times a day. Under no circumstances should children be overmedicated.

COUGH:—This is a signal that something is wrong either in the lungs or in the throat. A persistent cough, worse at night, is probably due to large tonsils or whooping cough. A cough which is lasting should never be neglected. In all cases the child should be carefully examined and treated.

BRONCHITIS:—No mother should attempt to treat a child with bronchitis because it may lead to bronchopneumonia. If for any reason a doctor is not called the child should be kept in a warm, well ventilated room. The food must be light and nutritious with a great deal of warm milk, water or weak tea. A mustard paste may be applied to the chest once or twice a day. Lard, camphor oil, turpentine or other greasy, bad smelling oils, ointments or liniments must never be applied to a baby's chest. Cups are of no value.

ACHES AND PAINS:—Children occasionally complain of various aches and pains in the joints or muscles. These are mostly due to rheumatism and should not be neglected. During an attack of joint pain or muscle ache they must be put to bed in a warm room and heat applied to the painful parts. Examination of the heart and proper medication are essential.

VOMITING, CONSTIPATION AND DIARRHEA:—These are common disorders of childhood. In most cases they are due to improper food or improper feeding. A suitable diet at regular hours and a mild laxative will correct many digestive disorders. When not relieved within a few days, the child must receive medical attention.

EARACHE:—This is usually secondary to bad tonsils and adenoids. The treatment consists in irrigating the ear with a warm solution of boric acid twice or three times a day. A few drops of warm glycerine may be dropped into the ear. Heat should be applied externally. When the trouble persists a physician should be consulted.

CONVULSIONS:—The first thing to do in case the baby has convulsions is to exclude all neighbors from the house. Then an ice bag to the head, a hot mustard bath and an enema will do good before the doctor arrives.

BED WETTING:—Habitual wetting at night may be due to some disease of the nervous system, the bladder or the kidneys. The child and the urine must be examined. A proper and regular diet with little or no fluid after supper and training in the control and regular emptying of the bladder may do some good. The child should be awakened once or twice during the night to empty the bladder.

SCURVY:—When a baby during the first year cries each time it is handled, or bleeds from the gums or nose or has black and blue spots on the body, it probably suffers from scurvy. This disease is due to bad feeding. A proper diet with fresh, unboiled milk and a good deal of orange juice or tomato juice will cure this disease. The blood must be examined to exclude other diseases.

RICKETS:—This is a disease of abnormal nutrition and lack of fresh air and sunshine. A rachitic child sweats at the head, has a large abdomen, flabby muscles and soft bones. The child is late in sitting, standing and walking. Dentition is delayed. Proper food, sunlight and cod-liver oil will cure this chronic ailment. Viosterol may be added to the cod-liver oil.

MEASLES, SCARLET FEVER AND WHOOPING COUGH:—Unfortunately these diseases are looked upon by many mothers as mild ailments and as a part of normal child life to be treated with all kinds of home remedies. Measles, scarlet fever and whooping cough are dangerous diseases and require careful medical treatment.

ECZEMA:—This is a common skin disease in babies. It is mainly the result of unsuitable food, bad feeding, or overfeeding. Overweight children frequently suffer from eczema. To treat this annoying condition, the food and feeding must be corrected. The baby should not be exposed to extreme heat or cold. A bland ointment of bismuth and zinc oxide applied to the skin will do good.

TRADITION AND SUPERSTITION:—In spite of the better education of the young mother of today, she is under the tutelage of her grandmother of yesterday. In the care and rearing of children she has made little progress. Wrong feeding is still common. Babies are rocked to sleep as in their grandmothers' days. There still exists a fear of water, fresh air and cleanliness in many diseases, especially in measles. All diseases of babyhood are still called teething. The young mother like her forebear loves to apply all kinds of nasty fats, ointments, oils and liniments to the baby's chest to abort a cold. Cups are still used for everything that ails the baby. Convulsions are being banished by incantations. Charms are still used to shield the baby from evil eyes. These and many other unnecessary and absurd practices,

which are the vestiges of a bygone age, are bequeathed from mother to daughter.

Diet During the First Year

Mother's milk is the best food for her infant. It is nature's food and is always fresh, clean, and nourishing. It must be given at regular hours.

For the first three months of life, the infant should be nursed for twenty minutes every three hours. Between the third and sixth month, every three and one-half hours. After the sixth month every four hours.

When, for some unfortunate reason, the infant is deprived of mother's milk, good, clean and fresh cows' milk must be given. It should be mixed with cool boiled water and sugar added. Different quantities of food and different proportions of milk, sugar and water are required according to the age and condition of the infant.

At two months of age, orange juice and cod-liver oil should be given.

After six months of age, a well cooked cereal, as cream of wheat, farina, or oatmeal with a pinch of salt, and milk should be given once a day. At eight months, zwieback, toast, or stale bread may be added to the diet. At ten months of age a soft-boiled egg, well cooked vegetable and chicken broth or beef juice may be given.

Diet During the Second Year

1. At 7 o'clock, a cup of milk. (If the baby arises early.)
2. At 9 o'clock, orange juice, or the juice from other ripe fruit.

BREAKFAST AT 10 O'CLOCK.

1. A well cooked cereal: barley, oatmeal, wheatena, farina or cream of wheat with a pinch of salt, and cream or milk.
2. Buttered toast.
3. A soft boiled egg if desired.
4. A cup of milk.

DINNER AT 2 O'CLOCK.

1. Soup. Chicken, mutton, or beef broth. Green, fresh vegetables and a mashed, boiled, or baked potato.
2. Meat, scraped or chopped, white meat of chicken (to be given during the second half of the second year).
3. Stale bread and butter.
4. Dessert: Junket, pudding, custard, baked apple or apple sauce. (The child should be put to bed after dinner.)

SUPPER AT 6 O'CLOCK.

1. A well cooked cereal with cream or milk.
2. Zwieback or crackers or stale bread with butter.
3. Cooked fruit or stewed prunes.
4. A cup of milk.

At bed time, a cup of milk if desired.

Nothing but water should be given between meals. Plenty of fresh air, day and night.

Diet During the 3rd, 4th and 5th Years

BREAKFAST AT 8 O'CLOCK.

1. Orange juice or juice from other ripe fruit.
2. A well cooked cereal: Oatmeal, farina, hominy, cream of wheat, wheatena, or rice, with cream or milk.
3. Bread and butter or buttered toast.
4. A soft boiled or poached egg.
5. A cup of milk or cocoa.

DINNER AT 12 OR 1 O'CLOCK.

1. Soup. Stewed tomatoes, carrots, spinach, fresh peas, string beans, asparagus tips, and a mashed, baked or boiled potato, or sweet potato.
2. Meat: beef, lamb, or chicken.
3. Bread and butter.
4. Dessert: bread or rice pudding, junket, custard, baked apple, or ice cream occasionally.

(The child should sleep after dinner. He may have a glass of milk after sleep.)

SUPPER AT 6 O'CLOCK.

1. A well cooked cereal with cream or milk.
2. Milk toast or bread and butter.
3. Fish occasionally.
4. Cooked fruit or stewed prunes.
5. A cup of milk.

No food between meals. Water should be given several times a day. The child should be kept outdoors as much as possible.

Diet For School Children

BREAKFAST AT 7:30.

1. Fruit.
2. A well cooked cereal with plenty of cream.
3. An egg, boiled, poached or omelet.
4. Bread and butter.
5. A cup of milk or cocoa.

DINNER AT 12:30.

1. Soup with rice, barley or hominy. Green, fresh vegetables.
2. Meat: steak, beef, lamb chops, mutton or chicken with creamed tomatoes, spinach, mashed potatoes or sweet potatoes. Fish occasionally.
3. Bread and butter.
4. Dessert: bread or tapioca pudding, custard, baked apple, apple sauce or ice cream.
5. A cup of milk.

(A glass of milk after school hours.)

SUPPER AT 6 O'CLOCK.

1. A well cooked cereal.
2. An egg in any style or cold meat occasionally.
3. Bread and butter.
4. Cooked fruit or plain cake.
5. A cup of milk or buttermilk.

Hereditary Diabetes Mellitus

Samuel Kennedy, Shelbyville, Ind. (*Journal A. M. A.*, Jan. 24, 1931), has had the opportunity to study a family in which ten cases of diabetes have occurred in two generations. The first generation consisted of twenty-eight persons, the children of Mr. A and of his two sisters, Mrs. B and Mrs. C. Five were children of Mr. A; eleven, of Mrs. B; twelve of Mrs. C. Three persons were lost trace of more than thirty-five years ago. Of the remaining twenty-five, eight developed diabetes, while seventeen did not develop diabetes; eleven are now living, fourteen have died. Of the eleven living, four have diabetes and seven are free from the disease. Of the fourteen dead, four died of diabetes, while ten died from other causes, four in infancy. In this generation there have been five amputations of a leg for diabetic gangrene; three of the patients who underwent amputation are living, two have died of diabetes. Information is lacking for only three members of this generation. In the second generation, thirty-five persons were studied. Thirteen were the grandchildren of Mrs. B, twenty-two were the grandchildren of Mrs. C. So far, only two of this generation developed diabetes. Twenty-four of the thirty-five are living, one with diabetes, twenty-three free from the disease. Eleven are dead; one died of diabetes, ten died of other causes, five in infancy. Three of this generation died of tuberculosis. Information is lacking on none of this generation, except as to such children as the three untraced persons of the first generation may have had. Of the original brother and two sisters, from whom these three branches of the family sprang, there is reason to suspect diabetes in only one, Mrs. C. Her death took place in 1896, when much less was known about this disease than now. Her age at death was 71 years. According to the account given by her family, she had leg ulcers for several years previous to her death, and for several months she had had sore toes. She had also lost a great deal of weight. Her last illness began with a cold; vomiting set in, and she went into coma and died in three or four days. At the time, her condition was diagnosed "typhoid pneumonia." The description is almost typical of acidosis but Kennedy does not include this case in his record, as it was not diagnosed diabetes by any physician at any time.

Contemporary Progress

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Medicine

Calcium and Parathyroid in Ulcerative Colitis

B. Haskell and A. Cantarow (*American Journal of Medical Sciences,* 181 : 180, February, 1931) report the treatment of chronic ulcerative colitis with calcium and parathyroid. The indications for the use of calcium in this condition are: Nutritional changes in the tissues with or without a disturbance of calcium partition; spasticity of the colon; and hemorrhage. The calcium was given in the form of calcium lactate or gluconate by mouth, three and a half to four hours before meals. Parathyroid extract was given intramuscularly to increase the absorption and utilization of the calcium. Of 13 patients treated by this method, 11 became clinically well in from four to eight weeks. Three patients were observed for only a short period, but of these 2 were so much improved that they discontinued further treatment. Ten patients were under observation from one to two and a half years. Of these 9 became clinically well; 7 have remained clinically well for two years or more, and 2 have had a relapse, which in each instance yielded to further calcium treatment. In all cases, cessation of bleeding was the earliest result of the treatment; another important result was the relaxation of colonic spasm with consequent relief of pain. In 8 cases the mucosa of the lower bowel became entirely normal in appearance. In several of the cases that responded well to the calcium-parathyroid treatment, other methods had been tried without relief. These results appear to justify the continued trial of this method of treatment in chronic ulcerative colitis.

Addison's Disease

J. M. Rogoff (*Canadian Medical Association Journal,* 24:43, January, 1931) reviews the experimental work done by him in collaboration with Stewart on the effect of adrenalectomy on animals (dogs), from which the conclusion was reached that the cortex (interrenal tissue) is the portion of the adrenal gland indispensable to life, and that it is destruction or loss of function of the adrenal cortex that is the cause of Addison's disease. On the basis of these findings he has prepared an extract of the adrenal cortex, called "Interrenalin," which he has used in the treatment of Addison's disease. This preparation is given by mouth. The interrenalin treatment is supplemented by intravenous injections of physiological salt solution or Ringer's solution with 2 to 6 per cent. dextrose added, given at the beginning of treatment or during an acute exacerbation of symptoms. In a group of 8 cases of Addison's disease that came under the author's observation prior to his use of interrenalin, the longest duration of life was not over two years, and usually six months to a year. In 6 cases in which interrenalin was used, but not till an advanced stage of the disease, the longest duration of life was three years, and 4 patients lived two years or over. In 8 cases at present under treatment in which interrenalin treatment was begun earlier in the disease, 6 are living two years or over since the onset, the longest duration of life being six years. In most cases the symptoms have been very definitely ameliorated.

L. G. Rowntree and his associates at the Mayo Clinic (*Journal American Medical Association,* 96:231, Jan. 24, 1931) report that 115 cases of Addison's disease have been observed at the Mayo Clinic in the last twenty years. Before 1920 "desultory efforts at substitution therapy were made," and in 1920 the Muirhead treatment was instituted and was used in 57 cases of Addison's disease up to 1930; this consisted in the administration of epinephrine subcutaneously to the point of tolerance and whole suprarenal or suprarenal cortex substance by mouth. In 1930 Swingle and Pfiffner reported the preparation of an aqueous extract of suprarenal cortex, and this preparation was first used at the Clinic in May, 1930, in a patient who had relapsed after showing improvement under the Muirhead treatment. This suprarenal cortex extract has since been used in the treatment of 6 other cases of Addison's disease, a total of 7 cases. The first supply of the cortex extract obtained was given subcutaneously, as it contained too much epinephrine for intravenous injection; when a fresh supply practically free from epinephrine was available, it was given intravenously as a rule; the usual dose was 10 to 20 c.c. daily in divided doses, but as much as 20 c.c. was given at one time in some instances. In cases with marked dehydration occurring during crises, dextrose (10 per cent.) in physiological saline solution was given intravenously. The immediate results in all these cases were excellent; anorexia disappeared and there was a gain in weight and strength, and a definite euphoria. Three of the patients who had formerly been under the Muirhead treatment stated that they felt better when the cortical hormone was given than with any other treatment. The authors note the beneficial results reported by Rogoff and Stewart with their suprarenal cortex given by mouth; and also good results reported by Hartmann with a suprarenal cortex extract prepared by him. They conclude that the suprarenal cortical hormone is a reliable remedy for meeting the crises in Addison's disease; and that with an unlimited supply and continued use of the hormone "it is possible that patients may be completely rehabilitated; this, however, is a matter yet to be determined."

Oxygen Therapy

A. J. Wineland and R. M. Waters (*Archives of Surgery,* 22:67, January, 1931) have found that oxygen in concentrations of more than 70 per cent. can be administered through a catheter passed through the nostril into the oral pharynx as close to the glottis as possible without allowing any of the gas to be swallowed. The catheter is provided with multiple openings at the tip. If prolonged treatment is necessary, a fresh catheter is inserted at twelve hour intervals in the alternate nostril. The authors have found this a satisfactory method of administering oxygen. It requires great care as to prop-

er fixation of the tube and maintaining a sufficient flow of oxygen, but does not interfere in any way with nursing care. The best single guide for determining the benefit derived from oxygen therapy and regulating the flow of gas, is the reduction of the pulse rate. Treatment should be started with a maximum concentration of oxygen until the pulse rate is reduced, then the concentration of oxygen may be reduced to the point where the reduction of pulse rate is maintained.

Treatment of Pernicious Anemia

J. F. Wilkinson (*British Medical Journal,* 1:85, Jan. 17, 1931) reports 108 cases of pernicious anemia treated with hog stomach preparations at the Manchester (England) Royal Infirmary. A few cases were given uncooked fresh hog stomach at the beginning of treatment, but as a rule a desiccated hog stomach preparation was used, which could be mixed with milk, or water, or other foodstuffs, provided it was not subjected to heat. The preparation used is a light powder, 25 grams of which are equivalent to 100 grams of fresh whole hog stomach; the dose employed in beginning treatment was 25 to 30 grams daily, divided into three portions; the average maintenance dose is 10 to 12 grams daily, after the blood picture has returned to normal. Of the 108 patients treated, 52 had never had liver or other special treatment; 31 had had liver previously but had relapsed (owing to discontinuance of the treatment or inadequate dosage); and 25 had also been on liver treatment, but complained of some return of symptoms, although the blood counts were relatively good (also using inadequate amounts of liver). The anemia was most severe in the first group without previous treatment, and the response to the hog stomach preparation was most marked in these cases. All the patients in the series showed satisfactory response to the treatment. Of the 52 cases without previous treatment and the 31 with definite relapse, 77 patients (92.7 per cent.) are well and free from symptoms of any kind, and 5 (or 6 per cent.) are well except for some degree of nervous impairment. Several cases with early postero-lateral involvement of the spinal cord showed remarkable improvement; and patients with paresthesias of the hands and feet without alteration of reflexes have been entirely or almost entirely relieved in most cases. The reticulocyte response was higher than that usually reported for similar initial blood pictures, 25 to 40 per cent. The remission was more rapid than that obtained with liver therapy in the author's experience, the red cells increasing 157 per cent. and the hemoglobin 94 per cent., as compared with 90 per cent. and 77 per cent. with liver therapy in the same period. Clinically the immediate results are similar to those obtained with liver therapy, although they occur more promptly. Gastro-intestinal symptoms are entirely relieved, although achylia gastrica persists. A minimum dose of hog's stomach is necessary to maintain health; this must be determined for each patient by means of repeated blood counts.

F. Tuchfeld (*Medizinische Klinik,* 27:130, Jan. 23, 1931) reports a study of the blood picture in relation to the gastric secretion in cases of gastric and duodenal ulcer, and finds that in peptic ulcer with hyperchlorhydria, there was a considerable percentage of cases with red cell counts over 5,000,000 and increased hemoglobin percentage. He is of the opinion that this fact may be related to the association of achylia gastrica with pernicious anemia, and the efficacy of stomach preparations in the treatment of the latter. Hyperacidity does not result in polycythemia nor achylia in anemia in every case. He agrees with the theory of Castle that the stomach secretes a ferment, the nature of which is unknown, which affects the red cell production. If this ferment is in excess in cases of hyperchlorhydria, an excessive production of red cells results; if it is absent in cases of achlorhydria, a deficiency in red cell production and anemia result. On this theory the administration of active stomach preparations in pernicious anemia would seem to have a more logical basis than liver therapy.

Diagnosis of Undulant Fever

J. H. Gibbs (*Southern Medical Journal,* 24:126, February, 1931) questions the reliability of the agglutination test in the diagnosis of undulant fever. He reports that comparative agglutination tests were made on 100 bloods at the U. S. Hygienic Laboratory and at the South Carolina Public Health Laboratory; 36 positive reactions, all but 4 positive at titers of 1:100 or above were reported from the latter, while the U. S. Laboratory reported only 5 positives and only 2 of these at titers of 1:100 or above. There was only one case in which the two laboratories agreed in reporting a positive reaction, both showing agglutination at high titers; in this case, the patient had a febrile illness of three months' duration with symptoms justifying the diagnosis of undulant fever. A questionnaire sent to directors of public health laboratories in the United States was answered by 37 of them; of these 35 stated that the diagnosis of undulant fever in their respective states was made chiefly by means of the agglutination test; 25 accepted agglutination at titers of 1:100 as significant of the diagnosis. The author concludes that this evidence is sufficient to "cast doubt on the reliability of the agglutination test for undulant fever as a criterion for the clinical diagnosis of this disease;" and to indicate that the test as done by public health laboratories in the United States is not standardized "in its performance or interpretation."

Pre-Operative Disinfection of the Skin

W. W. Scott and K. E. Birkhaug (*Annals of Surgery,* 93-587, February, 1931) note that "perhaps in no branch of surgical technique has there been a greater diversity of opinion than in that of pre-operative skin disinfection," as is indicated by the "colorful array" of such disinfectants in daily use in surgical clinics. They report experiments on infected rabbit skin and unwashed human skin, to determine the effect of various skin disinfectants in surface and deep skin disinfection. The disinfectants used in these experiments were alcohol-acetone-aqueous 2 per cent. solution of mercurochrome, a 7 per cent tincture of iodine, and an alcohol-acetone-aqueous 0.5 per cent. solution of metaphen. In surface skin disinfection of rabbit's skin infected with undiluted eighteen-hour cultures of *Staphylococcus aureus, Streptococcus hemolyticus, B. coli* and the spore bearing *B. subtilis,* it was found that with three minutes' contact, the mercurochrome solution killed 51.5 per cent. of the organisms, the iodine tincture, 79.7 per cent., and the metaphen solution, 89.7 per cent. In experiments with deep skin sterilization (pinch grafts) on infected rabbit's skin with the same microörganisms, it was found that the mercurochrome and the iodine failed to kill the *B. subtilis* after three minutes' contact, but the metaphen solution destroyed 88 per cent. of these organisms. The total deep skin disinfection against all the organisms was 26 per cent. with mercurochrome, 47 per cent. with iodine, and 87 per cent. with metaphen. With the unwashed human skin (on the interior of the thigh), surface-skin disinfection was obtained in 28.8 per cent. of tests with the mercurochrome solution, in 96.1 per cent. with the iodine tincture, and in 98 per cent. with the metaphen solution. In scraping tests for deep skin disinfection of the unwashed human skin, it was found that sterilization was obtained with mercurochrome in

3.8 per cent., with iodine in 84.6 per cent., and with metaphen in 94.2 per cent. A control alcohol-acetone-aqueous solution had no sterilizing action on either infected rabbit's skin or unwashed human skin. This study shows that the alcohol-acetone-aqueous 0.5 per cent. solution of metaphen is relatively more effective in the sterilization of the skin than mercurochrome or tincture of iodine, and that under strictly controlled conditions it fulfills the requirements of an efficient and non-deleterious pre-operative skin disinfectant.

Surgery

Healing of Electrosurgical Wounds

J. D. Ellis (*Journal of the American Medical Association,* 96:16, Jan. 3, 1931), states that the interest in and increasing use of electrosurgery in the last decade is largely due to the development of several valuable electrosurgical knives. These knives provide for the use of a very high frequency oscillating current; eliminate "the irritating sparking" of the older machines; permit very delicate modulation of the currents so as to produce various effects on the tissues. With all these surgical currents, the sharp-pointed, active electrode (the knife), is cold when applied to the tissues, and the effects produced are due to the generation of ohmic heat by the current passing into the tissues. The use of the cutting currents has undoubtedly facilitated many operations in easily bleeding fields, by making it possible to control capillary hemorrhage by desiccation without producing coagulation and slough. Some operators have reported primary healing and rapid cicatrization as characteristic of electrosurgical wounds, but the author's own experience has not been wholly in accord with this conclusion. He has, therefore, made a special study of the healing of electrosurgical wounds in animals (dogs) as compared with similar scalpel wounds. He used the method described by Howes, Sooy and Harvey for the determination of the tensile strength of surgical wounds. It was found that in skin wounds, only 60 per cent. of the electrosurgical wounds healed by primary union as compared to 97.5 per cent. of the scalpel wounds. When union did occur, the tensile strength of the electrosurgical wound was somewhat less than that of the corresponding scalpel wound. In stomach and muscle incisions, the electrosurgical wounds showed the same percentage of primary union as the scalpel wounds. The electrically produced wounds in the stomach were definitely weaker (less tensile strength) at about the midpoint of healing as compared with the scalpel wounds. The electrically produced wounds in muscle showed the same tensile strength as the scalpel wounds throughout the process of healing. These findings, the author concludes, are not an argument against the use of the electrosurgical knife where it is definitely indicated, but the latter cannot be considered as a substitute for the scalpel for routine use.

Biliary Tract Visualization With Radiopaque Oils

R. H. Overholt (*Surgery, Gynecology and Obstetrics,* 52:92, January, 1931) notes that following operations on the biliary tract, especially cholecystectomy, cholecystostomy and choledochostomy, a definite knowledge of the patency of the biliary duct system is necessary for proper postoperative management and for determining whether or not a secondary operation is indicated before withdrawal of the T-tube. At the University of Pennsylvania Hospital, it has been found that in postoperative cases of this type, a roentgenological study during the injection of a radiopaque solution is of definite value. Twelve such studies on 11 patients are reported. The examination was made with the fluorscope on the second or third week after operation. Campiodol (iodized rape seed oil) was the opaque medium used, injected through the gall-bladder drainage tube or common duct tube under fluorscopic control without pressure; 15 to 20 cc. were used. In no instance was there any ill effect. In patients with no obstruction of the common duct, the campiodol passed through the duct and into the duodenum, sometimes momentarily arrested at the ampulla. When the common duct was completely obstructed, it and the hepatic ducts were promptly filled and well visualized by the opaque medium. With partial obstruction, there was a small expulsion of oil into the duodenum with filling of the duct system. In cases of cholecystotomy, if there was an obstruction, gall-bladder cystic and hepatic ducts were visualized; if no obstruction was present the oil was seen to enter the duodenum, and gallbladder and ducts filled poorly. The procedure was of special value in such cases, in which exploration at the time of the operation was unwise. In one case actual rhythmic contractions of the gall-bladder were demonstrated, which continued when the patient was directed to hold the breath. Where common duct obstruction had existed for some time, the hepatic ducts were found to be dilated.

Vaccination Against Peritonitis in Surgery of the Colon

F. W. Rankin and J. A. Bargen (*Archives of Surgery,* 22:98, January, 1931) report the use of intraperitoneal vaccine in the pre-operative treatment of malignant disease of the colon. The vaccine is prepared from cultures of streptococci and colon bacilli obtained from the peritoneal exudate of a case of peritonitis. This vaccine, in physiological solution of sodium chloride, is injected with a dulled spinal puncture needle into the peritoneal cavity. As a rule two injections were given five and two days prior to resection of the colon. Occasionally it was found necessary to operate within twenty-four hours after injection of the vaccine; in such cases marked injection and hyperemia of the peritoneum was noted by the surgeon. In 222 cases in which various operations on the colon for malignant disease were done from Jan. 1 to Oct. 1, 1929, pre-operative intraperitoneal vaccination was done; many of these patients had graded resections. There were 11 deaths from peritonitis in this series. In 58 cases with similar lesions operated during this same period without pre-operative vaccination, there were 13 deaths from peritonitis. These results clearly indicate the value of pre-operative vaccination against peritonitis in cases in which resection of the large intestine is done. The systematic reaction of the patient to the vaccine injection may be moderately severe, but it is of short duration, and never alarming. The optimum time for operation is forty-eight hours after the second injection of vaccine.

Thyroidectomy in Older People

J. M. Mora and E. I. Green (*American Journal of Medical Sciences,* 181:74, January, 1931) report that of 1,060 patients operated on for toxic goiter, 200 were fifty years of age or over; the average age in this group was 56.6 years, and the oldest patients (2 cases) were seventy-six years of age. The group included 145 females and 55 males. There were 133 cases, 66.5 per cent., of primary hyperthyroidism (hyperplastic thyroids) and 67 cases, 33.5 per cent., of toxic adenoma; this, the authors note, is of special interest as the toxic nodular goiter is generally considered to occur most frequently in later life. The chief symptoms were loss of weight, tachycardia, nervousness, and tremor, given in order of frequency; 58 patients had bilateral, and 3 unilateral exophthalmos. Tachycardia was present in

146 cases, or 73 per cent.; 85, or 42.5 per cent., had left heart enlargement; 30, or 15 per cent., auricular fibrillation. There were 6 postoperative deaths in these 200 cases; in the entire series of 1,060 cases, there was only one other postoperative death, a total mortality of 0.66 per cent. Postoperative metabolic readings were made in 175 cases; in 171, or 97.7 per cent., the rate had returned to normal, and the patients were relieved of their thyrotoxicosis; of the 4 patients with a postoperative metabolic rate above 15 plus, one has since died with well-marked cardiovascular renal degeneration. Of 30 cases with pre-operative auricular fibrillation, 27 were restored to normal rhythm; and of the 61 cases with exophthalmos, all but 5 were relieved of this symptom. All the cases, whether of the hyperplastic or adenomatous type, showed a favorable response to pre-operative iodin therapy.

Urology

Avertin and the Kidneys

W. Grossman (*Zentralblatt fur Chirurgie,* 58:144, Jan. 17, 1931) notes that renal disease or renal insufficiency is usually considered as a contra-indication to the use of avertin as an anesthetic, but that but little definite proof has been advanced that avertin is injurious to the kidneys. In a review of the deaths reported as due to avertin anesthesia, the author finds only 5 cases in which renal damage may have been due to avertin and may have been a factor in the fatality. In none of these cases, however, could the renal damage be definitely attributed to the anesthetic. In experiments on animals, on which bilateral or unilateral nephrectomy had been done, he found that the nephrectomized animals showed no ill effects of avertin anesthesia; in animals in which one kidney had been removed, the remaining kidney showed no signs of damage. In normal animals given avertin in amounts of 0.4 gm. per kg. body weight daily, one out of 4 animals died on the sixth day and showed hyperemia of the glomeruli; in the other animals the kidneys were intact. Animals in which a nephritis was produced by uranium—corresponding to acute nephritis in man—did not tolerate avertin anesthesia well. The author concludes that acute and subacute nephritis is a definite contra-indication to avertin anesthesia, and possible chronic nephritis, also; but that other non-inflammatory renal diseases are not contra-indications to avertin.

Blood Lipoids in Nephrosis and Chronic Nephritis With Edema

L. Lichtenstein and E. Z. Epstein (*Archives of Internal Medicine,* 47:122, January, 1931) report the determination of the blood lipoids—cholesterol, cholesterol ester and phosphatides—the serum proteins and urea nitrogen in 3 cases of typical lipoid nephrosis in children, one case of syphilitic nephrosis, one case of amyloid disease of the kidneys, and 7 cases in which a nephrotic picture had supervened in the course of subacute or chronic glomerulonephritis (3 cases in children and 4 in adults). In all these cases the cholesterol and phosphatides were definitely increased; the cholesterol was 1,000 mg. or above in 4 cases, the highest level being 1,380 mg. The phosphatide content was highest in the cases with the highest cholesterol values. A striking feature of the lipoidemia in these cases was the increase in the cholesterol ester fraction; in 6 cases up to 80 to 90 per cent. of the total cholesterol. A diminution of the serum proteins and a relatively greater reduction of the albumin were also observed in all these cases. One of the cases of acute glomerulonephritis in children with superimposed nephrosis showed a moderate urea nitrogen retention. In addition 2 children formerly observed with clinical nephrosis were studied while in a stage of remission, and were found to have completelv normal blood lipoid and serum protein values. The authors find that the lipoidemia and changes in serum protein in chronic diffuse nephritis with edema may be of the same type and often as pronounced as in pure lipoid nephrosis. A differentiation between the two in such instances is possible only by the history, the presence of red blood cells in the urine, hypertension or evidences of cardiovascular involvement.

Denervation of the Kidney and the Ureter

S. H. and R. G. S. Harris (*British Journal of Urology,* 4:367, December, 1930) report 28 cases in which denervation of the kidney was done at the Lewisham Hospital, Sydney, in the past four years. In these cases, the chief symptom was pain; this pain recurred after temporary relief by eserin. Urological examination showed no organic obstruction, and no infection; reproduction of the typical pain on cystoscopic examination; delay in emptying of the pyelographic medium; possibly slight clubbing of the calices and dilatation of the pelvis. Pyeloscopic examination showed three types of abnormalities in the contractions of the calices and renal pelvis suggesting that the symptoms in these cases were due to a renal sympatheticotonus: 1. Irregular and incomplete contractions of the calices and renal pelvis so that impulse for peristalsis does not reach or does not pass the ureteropelvic junction; with resulting delayed emptying time. Clinically this group is characterized by intermittent colicky pain, generally of moderate severity. This condition, the authors note, is really one of "fibrillation closely akin to auricular fibrillation in the heart." 2. Marked slowing down with irregularity and increased power of the contractions, generally associated with dilatation of the pelvis and clubbing of the calices, and also with delayed emptying. The pain in this type is more persistent and dull with occasional acute exacerbations. 3. Dilatation, immobility and delayed emptying of a single calyx, probably merely a variant of type 2; found in two recent cases, not yet operated, probably a localized sympatheticotonus. At operation the kidney is exposed extra-peritoneally through a boomerang-shaped lumbar incision and completely freed from its fascia and fat. The pedicle is isolated from its surrounding tissues, beginning as far from the kidney as possible and working toward the kidney. After the pedicle is isolated, each vessel is completely denuded of connective tissue, and all tissue lying between the vessels is removed (always working toward the kidney). The superior ureteral nerve is divided. The operation is tedious but complete operation is necessary for good results. In the cases operated, the relief of pain was complete and there has been no recurrence on the side operated; in one case a second operation on the opposite kidney was necessary.

L. R. Wharton and W. Hughson (*Journal of Urology,* 25:145, February, 1931) note that there is a group of cases with painful ureteral spasm in which no organic lesion can be found. Most of these cases are relieved by such measures as rest and ureteral dilatation and lavage, but a few cases are met with in which such measures fail and the symptoms become increasingly distressing. In 2 such cases, in one of which the opposite kidney had been previously removed, denervation of the ureter was done. The ureter was stripped free of every attachment from the fourth lumbar vertebra to the bladder wall; in the second case the operation was done on both sides. In both cases there was no obstruction to the passage of a No. 8 renal catheter, and wax bulbs ap-

proximately 4 mm. in size hung on on being withdrawn. The urine was sterile and clear. One ureter in the second case showed dilatation with hydronephrosis, which was relieved by the operation. These findings, the authors consider, indicate a persistent state of spasticity of the ureter. Both patients were entirely relieved of symptoms; the first patient was operated over five years ago, the second more than three years ago. Neither has had any recurrence of pain or any urological symptoms since operation.

Combined Ureteronephrectomy

R. Gutierrez (*Annals of Surgery,* 93:511, February, 1931) concludes, from his own clinical experience and a review of the literature, that if the ureter is diseased for its entire length in cases in which a nephrectomy is done, its complete removal is indicated; this occurs in about 18 per cent. of all surgical conditions of the kidney. For the complete removal of both kidney and ureter, the author prefers a combined ureteronephrectomy in two stages to a nephrectomy with secondary ureterectomy. With modern methods of diagnosis—cystography, pyeloureterography and intravenous pyelography—the condition of the ureter and the necessity for its removal can be determined prior to operation, and the type of operation planned accordingly. When the diagnosis is established and the removal of kidney and ureter in one piece without opening it is indicated, the author advocates that the operation should always begin by cutting across the ureter as close to the walls of the bladder as possible between two clamps, and making a double ligature of both ends of the cut ureter. The incision for this procedure that the author has found most satisfactory is the oblique incision parallel to Poupart's ligament, 5 to 6 cm. in length, running from about the level of the anterior superior spine to the semilunar line. For the removal of the kidney the classic lumbar incision, slightly more oblique from behind or from outside inward, is employed. The whole specimen is removed *in toto,* and in one piece as soon as the ureter is isolated and pulled out. A cigarette drain at one end of each of the angles of the wound provides the best drainage; these may be removed on the second or third day. This two-stage operation may be done in one sitting. The advantages of this operation, the author maintains, are: It divides the operative shock by the two separate incisions; it preserves the resistance of the abdominal wall against herniation; it makes the surgical procedure one of simple technique and anatomically avascular so that the wound heals by primary union; it avoids the common complications of nephrectomy caused by an infected ureter stump and necessitating a secondary operation; and results in permanent cure.

Influence of Lower Urinary Tract Infection on Upper Urinary Tract Disease

C. D. Allen (*Urological and Cutaneous Review,* 35: 44, January, 1931) notes that in his cystoscopic examinations at the U. S. Veterans' Hospital at Memphis, Tenn., he uses the McCarthy panendoscope in practically all cases. With this instrument a clear view of the verumontanum is easily obtained. All patients prior to cystoscopic examination have a rectal examination of the prostate and seminal vesicles. As a result of this method of examination, the author is convinced of the frequent association of upper urinary tract disease in the male with infection of the posterior urethra, prostate and seminal vesicles. Of 1,600 admissions to the Veterans' Hospital in the first six months of 1930, 187 were sent to the Urological Service for complete examination. Of these 70 showed lower urinary tract disease alone; 52 showed associated upper and lower urinary tract disease; 35 renal and ureteral disease alone; 30 no evidence of urological disease. None of these were cases of tuberculous infection. Of the 70 patients showing definite evidence of lower urinary tract disease alone, some had pain suggestive of renal disease, and several had "pin point" ureteral openings. Whether any of these patients if left untreated would have developed definite disease of the upper urinary tract cannot be stated. Of the 87 cases with upper urinary tract disease, 52 had definite infection of the prostate, vesicles and posterior urethra. The other 35 had late, far advanced renal and ureteral lesions in which operative procedures were often necessary. Whether any of these patients had adnexal disease at the beginning of their trouble could not be determined. In the 52 cases of associated upper and lower urinary tract disease, the history frequently showed that symptoms of lower urinary tract infection antedated those of the upper urinary tract disease. In these cases as a rule, treatment of the lower urinary tract infection resulted in a prompt remission or cure of the upper tract disease, while previous experience has shown that treatment of the upper urinary tract disease without attention to associated adnexal disease gave poor results. The author concludes that in cases of associated adnexal disease and renal or ureteral lesions, the former is usually responsible for the latter.

Pediatrics

In the February issue of the MEDICAL TIMES AND LONG ISLAND MEDICAL JOURNAL, attention was called to the growing popularity of anatoxin (toxoid) as an immunizing agent against diphtheria instead of toxin antitoxin. Now comes another method that bids fair to replace both other methods because of its simplicity and absence of possible general reactions. Abt and Feingold (*American Journal of Diseases of Children,* 41-8, Jan., 1931) used the percutaneous method of Loewenstein for diphtheria immunization in 62 children. The material was supplied by Loewenstein and as yet is not generally available for physicians in this country. It is an ointment containing not only diphtheria toxoid, but also unfiltered full culture of killed diphtheria bacilli. The site for the application of the ointment may be either the back, chest, abdomen, arms or legs, depending on the size of the infant or child. The skin is prepared by cleansing the body secretions with ether followed by an application of alcohol which is allowed to dry. The content of one tube of the ointment is then applied and rubbed in with a wooden spatula or the finger tips. This takes about 2 or 3 minutes. The ointment dries shortly leaving a yellow coating. No bath is given for at least 24 hours. The treatment is repeated at weekly intervals for 3 doses. Of the 62 previously Schicked children treated by this method, 44 or 70.9 per cent showed negative Schick tests at variable intervals. These results are similar to the results from abroad where the Loewenstein method has been used in thousands of cases.

Kagel and Gasul (*American Journal of Diseases of Children* 41-45, Jan., 1931), report the use of the Loewenstein method in 47 children. A Schick test was made previous to the treatment and six weeks after the last treatment the Schick test was negative in 26 or 53.3 per cent. No local or general reaction was observed. The advantage of this method lies in its simple technic, absolute painlessness and absence of reaction. Also the fact that the immunizing substance is both antitoxic and antibacillary.

(*Concluded on page 161*)

Medical Times

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NEW YORK, APRIL, 1931

Render Unto Caesar the Things That Are Caesar's

"The fate of all issues lies in the lap of the gods of the machine."

One would suppose that the "capitulation" of such a conservative body as the Federal Council of Churches would arouse doubts even in the skulls of the birth control propagandists as to their place in the history of radical thought and action.

The truth is, of course, that the birth control movement has been a reactionary one, admirably designed to serve the twentieth century Caesar and therefore certain to win ultimate respectability. The Council, emboldened by the earlier action of the Lambeth Bishops, has finally performed the pleasant duty expected of it.

The lag in the movement's "progress" to date has been due, first, to the inherent stupidity of the crass materialists in whose hands the fate of the world has rested; second, to the temporary unreadiness of the materialists to see to its application on a large scale even though its utility had finally evoked discernment; third, the cunning even of an awakened Caesar is challenged as to how best to nullify the traditions so laboriously instilled into the common people which served so well in the past but are now a pest to the wide-awake arbiter; fourth, the lack until now of a world-wide depression to emphasize its claims as the greatest of palliatives for a desperately harassed system. The people have had nothing to do with the issue other than to act their pitiful parts, when called upon, as mere pawns and robots, which they will continue to do.

Most interesting in the new dispensation is the portended position of woman, the eternal goat—exploited and reduced to biologic subjection as never before. For this new woman is to be told exactly where she "gets off" as a mother. Her maternity is to wait upon the system, not the system upon her. She is to be denied even a reasonable measure of motherhood, such a measure as would make the fulfilment of her destiny as a natural human right certain and satisfying and indispensable to the purposes of a decent civilization. This exploitation by a disgraceful system inviting not deodorization but scrapping will doubtless be accepted by her with at least as great a docility as she accepted the rôle of child-bearer extraordinary to the Caesars of yesterday.

Only through a vast fertility could the mother of yesterday gear the social system. To-day our system will be immeasurably facilitated by a relative denial of maternity. For the Caesar of to-day is done with charity, and homes for superfluous children who have been salvaged by modern science, and with pestilence as a scavenger. He is also having a vision even as to war, but not for reasons distinguished for their nobleness.

The machine will more and more lessen the need for vast hordes of human robots. To-day the problem of the system's inability to absorb and make use of them as workers and buyers is obviously the most acute of any. But the next generation of children will be born of the new breed of standardized mothers and the problem will have been "solved."

What more ironical than that the leaders of the birth control movement should always have regarded themselves as radical reformers when they have been nothing other than the best of Caesar's friends?

So a distinguishing feature in women's styles henceforward will be larger and heavier CHAINS.

What artist shall design the madonna's antithesis? We nominate Epstein. Thwarted maternity should challenge even his genius for producing fearsome sculpture.

What ho, all ye potential mothers of the race!

Ye who have rendered unto the Caesar of yesterday children without stint or count when so charged—

Give ear to the Machine Maternity Bureau:

Until further notice bear ye no more children upon peril of the wrath of the Lord of the Machine!

The whip cracks, the knout descends. Mothers of the world, to heel!

Announcing New Departments

Two new departments appear in this issue: CONTEMPORARY PROGRESS and CULTURAL MEDICINE.

CONTEMPORARY PROGRESS will skim the cream of the current American and foreign literature in twelve branches. Four branches will be covered in each issue. The EDITORIAL SPONSORS are:

Malford W. Thewlis, New York, N. Y., Medicine.

Aimé Paul Heineck, Chicago, Illinois, Surgery.

Oliver L. Stringfield, Stamford, Connecticut, Pediatrics.

Victor Cox Pedersen, New York, N. Y., Urology.

Harvey B. Matthews, Brooklyn, N. Y., Obstetrics, Gynecology.

Harold Hays, New York, N. Y., Nose and Throat, Otology.

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Charles R. Brooke, New York, N. Y., Physical Therapy.

Walter B. Weidler, New York, N. Y., Ophthalmology.

Harold R. Merwarth, Brooklyn, N. Y., Neurology.

CONTEMPORARY PROGRESS takes the place of the ANNUAL PROGRESS NUMBER. It will do for the reader what the ANNUAL PROGRESS NUMBER has done, but he will be presented with readily assimilable instalments of fresh material instead of a lengthy résumé of the whole of an elapsed year. The ANNUAL PROGRESS NUMBER was a highly valuable feature of our journal, but we believe that the new department will eclipse it in interest and importance. The EDITORIAL SPONSORS, with the exception of Dr. Merwarth, are the same men who produced the ANNUAL PROGRESS NUMBER.

CULTURAL MEDICINE will aim to present from time to time, not necessarily in every issue, topics of historic, esthetic, biographic or literary interest, in the belief that the doctor is catholic-minded and not limited in his intellectual life to the technical, objective and economic.

Partial Clarification of the Maternal Mortality Issue

It is estimated by Adair that the United States suffers an annual maternal mortality of over 150,000. The factors accounting for this great loss have been closely studied by Polak, the outstanding one being the lack of adequate prenatal, natal and postnatal care.

In view of the aspersions which have been cast of late upon the medical profession with respect to almost entire responsibility for the high maternal mortality in this country, recent statistical studies of the New York City Department of Health are suggestive. It appears that the safest child-bearing period is between fifteen and thirty. There is a sharp rise in the mortality rate after thirty and still another in the next quinquennium. After forty-five there is a final rise. These figures are based upon an analysis of 629 maternal deaths occurring in the city in 1929.

The moral is that late marriages and the postponement of childbearing must be taken into account along with the alleged shortcomings of medicine. It would seem that even the advanced obstetrics of the day is bound to suffer in desired results under this social handicap for which it is in no wise responsible; for this handicap is not a local phenomenon, but nation-wide, and must number its victims by thousands.

Alcohol Therapy

> Thus saith the Lord, As the new wine is found in the cluster, and one saith, Destroy it not; for a blessing is in it: so will I do for my servants' sakes, that I may not destroy them all.
>
> —Isaiah lxv: 8.

There are two indications for the employment of alcohol not commonly taken into account. One is the pain of cancer, which R. B. Wild, of Manchester, England, has been able to alleviate markedly by the use of full doses, especially in patients not habituated to it. Its chief use in this condition he finds to be as an adjunct to other anodynes, since it exerts a synergistic action which increases their effect, though in some cases it may suffice alone; exacerbations of pain may sometimes be controlled by a full dose without other medication. Whether effective alone or used as a means of limiting or postponing morphinism, it is not infrequently a beneficent resource. The other indication is in minor operations and dentistry for its analgesic effect, obviating oftentimes the use of local anesthetics or enabling the operator to use smaller amounts of them. In the latter case the nature of the agent need not necessarily be revealed. This method links, in a sense, with Crile's anoci-association idea—the blocking off of the higher centers with consequent blunting of harmful association impulses—and is a readily available resource. Those who have witnessed operations of the order of breast amputation, after the induction of a fair degree of alcoholic narcosis, have considerable respect for this ancient agent's powers over pain.

On Falling Asleep in the Movies

The silent movie was a kind of rest station for many fatigued individuals seeking surcease from stresses and strains. The semi-darkness, the musical score, the ocular fatigue, and the soporific nature of most of the films lulled them to sleep and to dreams. For a siesta away from home with its many distractions the silent movie offered much attraction. If the film happened to be good they stayed awake longer, perhaps saw it out and then took a nap during the repetition. Thus the old silent film-house entertained and served as a temporary sanitarium, and in its latter function was no unimportant therapeutic resource.

The sound film, among numerous other objections, has added its racket to the general ballyhoo of noise. No longer a rest station, the contemporary cinema has ceased to be a haven for most tired people. Now a nightmare, one must seek other reasons for its lure.

But there is still a large class that, unterrified, can still sleep while the criminals of the silver screen blast safes—the deaf.

Deafness is not wholly a liability in these days. Ask Mr. Edison.

A So-Called Shortcoming

Stock and bond salesmen and authorities on business and finance say that the financial intelligence, so to speak, of the average physician is rather low.

Well, the major efforts made by this average physician have to do with the prevention of disease. The doctor's fundamental philosophy is one which looks to the abolishment of his own source of livelihood. Perhaps it is this fact as much as any other that prompts the salesmen and the experts to point to his shortcoming. How can such people be expected to have any respect for such a person? In the nature of things, how can such a man crash cleverly into any part of the world of finance?

Yet we have no apology to make for such a grave shortcoming.

When Publicity Itself Smells

We have entered upon an era of publicity in the disguise of hygienic counsel which is disgusting, to say the least. There are the "spit" items, implying that one is not safe against spit-made cigars unless one buys a particular brand. We also have the pyorrhea and halitosis and body odor notices. Then there are the ones which suggest to the ladies the reasons why husbands and lovers are repelled by specific odors and tell how to remedy the trouble infallibly. Finally, there are the placards which proclaim the fearsome buccal status which is alleged to afflict all of us every morning and indicate the only corrective.

Are we not about ready for a presentation, somewhat after the manner of Rabelais—modified for modern consumption—of the tissue which best meets hygienic requirements in the proctologic area. What choice competition is here possible! What is holding back the vulgar commercialists who are vying with one another in certain areas of the publicity field?

It is the offensive vulgarity that permeates a certain type of publicity that provokes disgust. It is founded upon a conception of the buying public that ascribes to it the character of swine, to be led gleefully in great

herds to the troughs of the amused salesmen. So in the midst of a situation which is offensively forced on the one side and not repudiated on the other many are bound to be nauseated.

Miscellany

Great Expectations

Even accepting the theory that liquor is a poison, there is no consistency in refusing its use by physicians while permitting physicians the use of deadly drugs. But there is no organization of fanatics opposing the use of such drugs. Perhaps that may come later.—*Eve. World.*

Contemporary Progress

(*Concluded from page 158*)

The advance of the use of this substance will be watched with a great deal of interest and it is hoped it will prove as valuable as our present accepted methods so we can stop the fear in children associated with the needle.

Phenobarbital In Infant Feeding

Barbour (*Archives of Pediatrics* 48-55, Jan., 1931) calls our attention to the use of phenobarbital in infant feeding. Sauer (*American Journal Diseases of Children* 37-3, Mar., 1929) first reported the use of this drug in pyloric stenosis. Barbour's latest report gives his results in 78 infants. The chief indications for phenobarbital are recurrent colic pylorospasm, pyloric stenosis and enterospasm. The dosage used was gr. ⅛ to gr. ¼ given at varying intervals of 4, 8, 12 or 24 hours depending on the results obtained. The drug was administered over periods from one to six months. In the cases of vomiting, the infants not only retained their food with suitable dosage of phenobarbital, but seemed to digest and assimilate it better than before the administration of the drug. Abdominal distention and visible peristalsis disappeared. The artificially fed infants seemed to thrive equally well on one kind of a rational formula as well as another; however, various observers have noticed that some infants cannot tolerate acid milk formulas. All the 76 infants treated with phenobarbital developed normally, both physically and mentally, during and after treatment. Phenobarbital proved more effective than atropine in the control of vomiting and caused none of the reactions observed with the latter drug. The only reaction to overdosage was a temporary drowsiness or stupor which soon disappeared. No cumulative effects of the drug were noted.

Tuberculous Infection In Children

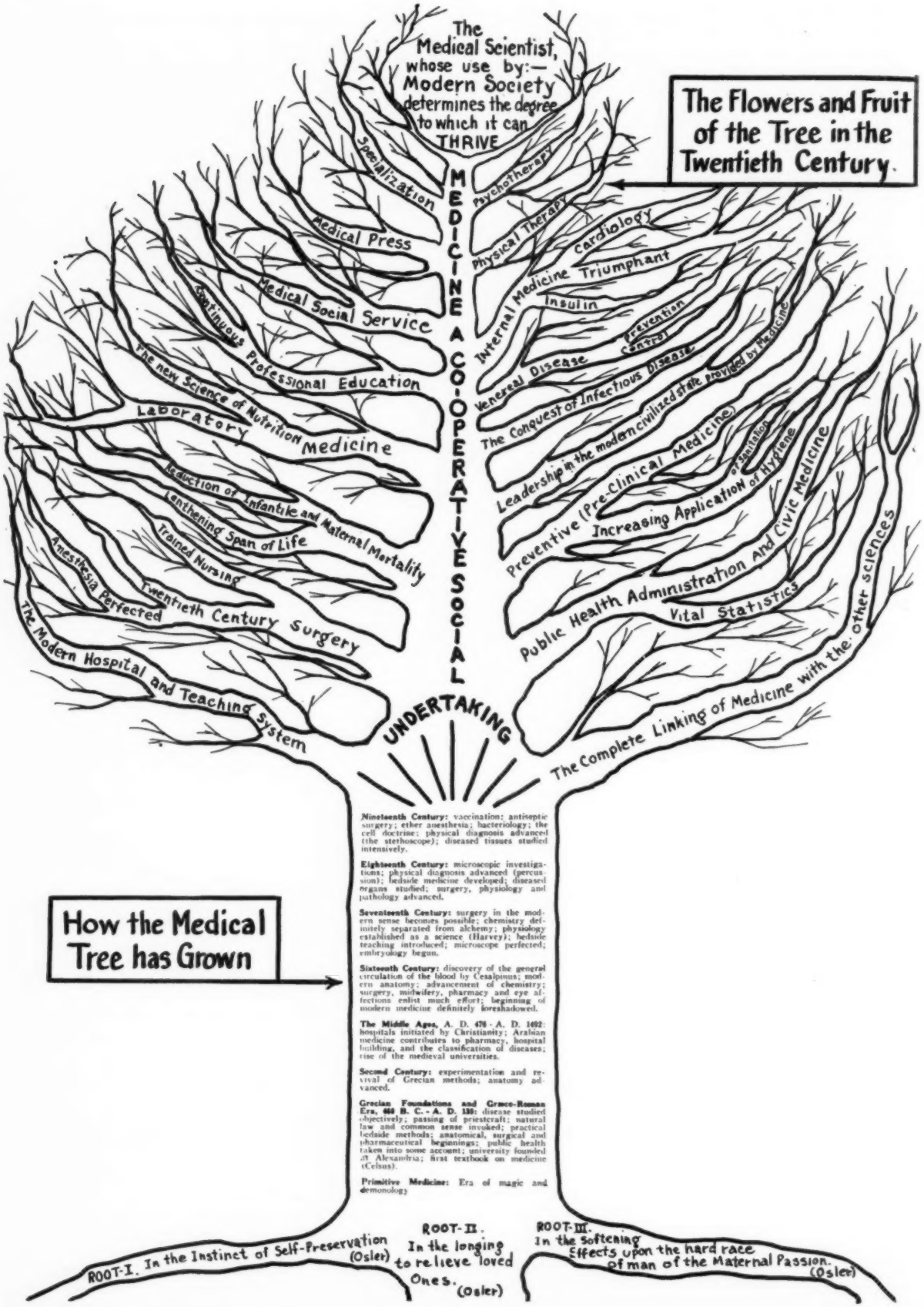
Dickey and Seitz (*American Review of Tuberculosis* 23-13, Jan., 1931) report the incidence of this infection in 3500 children attending the children's clinic of the Stanford University Medical School. This clinic is a pay clinic and is composed of children from families of adequate income. The Mantoux test for tuberculosis was done and showed an incidence of 23.5 per cent positive reactions. There was a gradual increase in the percentage of positive reactions with the age so that at the age of 14 years the percentage was 46.6 per cent. This is particularly significant as representing the incidence of tuberculous infection "at the approximate transition from childhood to adult life." Other American cities report a higher incidence at this age. In only a few districts is the amount of infection in children directly proportional to the mortality rates from tuberculosis or the number of cases reported. The incidence of tuberculous infection in children depends upon the opportunities for exposure to infection. It is diminished by early recognition of open cases, and early removal of such cases from an environment where they may serve as contacts to susceptible children.

In the treatment of tuberculosis in children L. & S. Eöry (*Monatsschrift für Kinderheilkinde* 48-509; Dec., 1930) note iodine milk is used as an organic iodine compound, especially by English and French physicians. The authors have used iodine milk in 185 cases of tuberculosis in children, including pulmonary, bone and skin tuberculosis. The dosage used was 5 drops of the tincture of iodine twice daily for infants and 10 drops twice daily for older children. The iodine was dropped in 100 gms. milk, the mixture shaken, and allowed to stand for half an hour. Analysis of the various constituents of the milk showed that the iodine was contained chiefly in the fat (58.6 per cent). All cases of bone, skin and gland tuberculosis healed promptly under this treatment with improvement in the general condition, gain in weight, and reduction or cessation of fever.

Focal pulmonary lesions either healed completely or showed marked regression, the best results being obtained in cases with a positive tuberculin reaction. Joint tuberculosis was not favorably influenced by the treatment. In military tuberculosis the progress of the disease seemed to be somewhat inhibited. In cases responding favorably to the iodine therapy, the gain in weight was rapid, and the children's general condition excellent. There was no untoward reaction to the iodine except in two cases in which there was evidence of hyperthyroidism. The treatment was discontinued in these cases.

Nutritional Injuries in Infants

H. L. Moore (*Southern Medical Journal*, 24:109, February, 1931) notes that infants who survive the surgical operation for pyloric stenosis without difficulty usually show a definite nutritional disturbance after operation, especially if they have reached an advanced stage of starvation prior to operation. A similar type of nutritional disturbance is observed in infants after many types of infection—pyelitis, otitis, infectious diarrhea, etc. These children often have a good appetite and take a sufficient quantity of food but do not gain in weight and develop a moderate diarrhea with consequent water loss. This is evidently due to a general metabolic disturbance. The high protein, low carbohydrate and low fat diet used in fermentative diarrheas is not indicated in these cases. The author has found that such cases do best if placed on a feeding formula consisting of 20 oz. skimmed milk with 20 oz. water with four tablespoonfuls of cream of wheat. The cream of wheat is stirred into the milk and water, while boiling, and then the mixture cooked two hours in a double boiler; one tablespoonful of cane sugar is added. Within twenty-four hours on this formula, the water loss is practically stopped; the stools become more pasty with a granular appearance as if the cream of wheat was passing through the bowels unchanged. In the next twenty-four hours the stools become smooth and pasty with no water loss, and the loss of weight is checked. The weight begins to show an increase and this increase is maintained as the formula is gradually modified by increasing the milk with a corresponding decrease of water and adding sugar in the form of malt or milk sugar. In cases with severe dehydration, fluids should also be given by clysis or intraperitoneally. The author has found this simple dietetic measure "of inestimable value" in nutritional disturbances in infants, in both hospital and private practice.


The Medical Scientist, whose use by:— Modern Society determines the degree to which it can THRIVE
The Flowers and Fruit of the Tree in the Twentieth Century.
MEDICINE A CO-OPERATIVE SOCIAL UNDERTAKING
Specialization
Medical Press
Medical Social Service
Continuous Professional Education
The new Science of Nutrition
Laboratory Medicine
Reduction of Infantile and Maternal Mortality
Lengthening Span of Life
Trained Nursing
Anesthesia Perfected
Twentieth Century Surgery
The Modern Hospital and Teaching System
Psychotherapy
Physical Therapy
Cardiology
Internal Medicine Triumphant
Insulin
Prevention
Control
Venereal Disease
The Conquest of Infectious Disease
Leadership in the modern civilized state provided by Medicine
Preventive (Pre-Clinical) Medicine
Increasing Application of Hygiene
of Sanitation
Public Health Administration And Civic Medicine
Vital Statistics
The Complete Linking of Medicine with the other sciences
How the Medical Tree has Grown
Nineteenth Century: vaccination; antiseptic surgery; ether anesthesia; bacteriology; the cell doctrine; physical diagnosis advanced (the stethoscope); diseased tissues studied intensively.
Eighteenth Century: microscopic investigations; physical diagnosis advanced (percussion); bedside medicine developed; diseased organs studied; surgery, physiology and pathology advanced.
Seventeenth Century: surgery in the modern sense becomes possible; chemistry definitely separated from alchemy; physiology established as a science (Harvey); bedside teaching introduced; microscope perfected; embryology begun.
Sixteenth Century: discovery of the general circulation of the blood by Cesalpinus; modern anatomy; advancement of chemistry; surgery, midwifery, pharmacy and eye affections enlist much effort; beginning of modern medicine definitely foreshadowed.
The Middle Ages, A. D. 476 - A. D. 1492: hospitals initiated by Christianity; Arabian medicine contributes to pharmacy, hospital building, and the classification of diseases; rise of the medieval universities.
Second Century: experimentation and revival of Grecian methods; anatomy advanced.
Grecian Foundations and Graeco-Roman Era, 460 B. C. - A. D. 130: disease studied objectively; passing of priestcraft; natural law and common sense invoked; practical bedside methods; anatomical, surgical and pharmaceutical beginnings; public health taken into some account; university founded at Alexandria; first textbook on medicine (Celsus).
Primitive Medicine: Era of magic and demonology
ROOT-I. In the Instinct of Self-Preservation (Osler)
ROOT-II. In the longing to relieve loved Ones. (Osler)
ROOT-III. In the softening Effects upon the hard race of man of the Maternal Passion. (Osler)

SEMINAR IN PHYSICAL THERAPY

Given Under the Auspices of the New York Physical Therapy Society Consisting of Didactic Lectures and Clinical Demonstrations

April

1st—8:30 P.M.	Physical Therapy in Fractures. Dr. Clay Ray Murray, Assistant Professor of Surgery, College of Physicians and Surgeons, Columbia University.
8th—3:30-5:00 P.M.	Medical Diathermy. Dr. Harry Eaton Stewart, Director, New Haven School of Physical Therapy, New Haven, Conn.
15th—3:30-5:00 P.M.	Surgical Diathermy. Dr. William Schmidt, St. Mary's Hospital, Philadelphia, Pa.
22nd—3:30-5:00 P.M.	Hydrotherapy. Dr. Joseph B. Nylin, Chief of Clinic, Department of Physical Therapy, University of Pennsylvania, Professor in Physical Therapy, Women's Medical College, Philadelphia, Pa.
29th—3:30-5:00 P.M.	Physical Therapy in Urology. Dr. F. G. Harrison, Associate Professor of Urology, Graduate School of Medicine, University of Pennsylvania, Associate G. U. Surgeon, Presbyterian Hospital, Philadelphia, Pa.

May

6th—8:30 P.M.	Indications and Contraindications of X-ray Radiation. Dr. Francis Carter Wood, St. Luke's Hospital, New York. Treatment of Cutaneous Cancer and Pre-cancerous Lesions. Dr. George Millar MacKee.
13th—3:30-5:00 P.M.	Physical Therapy in Orthopedics. Dr. Walter I. Galland, Assistant Orthopedist, Joint Diseases and Lenox Hill Hospitals.
20th—3:30-5:00 P.M.	Physical Therapy in Gynaecology. Dr. Grant E. Ward, Baltimore.
27th—3:30-5:00 P.M.	Posture as a Therapeutic Procedure. Dr. Royal Storr Haynes, New York. Posture and Exercise in Adults. Dr. K. G. Hansson, Director of Physical Therapy Dept., Hospital of Ruptured and Crippled, New York.

New York Physical Therapy Society

At the Annual Meeting of the New York Physical Therapy Society on 4th March, 1931, the following officers were elected for the year 1931-1932:

President: William Bierman, M.D.; Vice-President: William H. Guillium, M.D.; Treasurer: Floyd O. Reed, M.D.; Secretary: Madge C. L. McGuinness, M.D.

Executive Committee: Charles R. Brooke, M.D., Chairman; Cassius L. DeVictoria, M.D.; Leon T. LeWald, M.D.; Heinrich Wolf, M.D.; Frank T. Woodbury, M.D.

Agranulocytic Angina

The first reference to agranulocytic angina seems to have been made in 1907, when Turk called attention to the low granulocyte count in some cases of severe sepsis. The suggestion apparently did not arouse interest until 1922, when Schultz described a number of cases which revealed an almost complete absence of granular cells associated with a group of symptoms and pathologic conditions which he declared formed a clinical entity. Later Friedemann named this group of cases "agranulocytic angina." The features emphasized by Schultz were a high fever, occurring generally in elderly women with necrotic throat infections, rapid exhaustion, slight jaundice frequently, leukopenia with few if any granular cells but no involvement of the red blood cells or platelets, and death within a short time in almost every case. After Schultz's work became known, case reports began to appear in medical literature everywhere: now more than 150 cases have been recorded. In 1927, Kastlin collected reports of forty-three cases and reported two more, with only three recoveries, a mortality of 93 per cent. Stomatitis was always present in these cases, necrotic ulcers occurring in the mouth, larynx or esophagus. Petechial hemorrhages were found in twelve cases at necropsy. In some of these cases there were high platelet counts but in others the counts were low. Nonreactive ulcers were found in the gastro-intestinal tract and in the female reproductive system. Because of the variations in the cases reported, Kastlin believes that agranulocytic angina is not a clinical entity. Moreover, numerous cases have been reported that vary even further from the original description. In some cases only a sore throat without ulceration, and the typical lack of granulocytes, are the diagnostic symptoms. Several investigators report an ulcer in the rectum or vagina without involvement of the throat, the clinical picture being otherwise the same. Blumer reports a case beginning with numerous boils that became large abscesses, with the blood and the clinical course essentially the same as in the cases described by Schultz. Harkins reports eight cases, four of which he considers to be agranulocytic angina and the other four of which he calls granulocytopenia. He classes one case as granulocytopenia because of the anemia and evidences of hemorrhagic diathesis, although it answers Schultz's description otherwise. Blanton reports a case which he calls agranulocytic angina in which there was a staphylococcus abscess in the neck. One abnormally low granulocyte count was found and after incision of the abscess, the count promptly returned to normal the next day. Farley has collected reports of a series of cases following arsphenamine therapy, which had an agranulocytic period. It is clear that there may be a variety of conditions associated with the low granulocyte count. Obviously, they cannot all be called agranulocyte angina. Schultz's description would eliminate a number of cases which, except for the location of the ulcer, seem to have the same basis. Stocké divides the cases into three different groups, one group answering Schultz's description, a second showing the presence of anemia, and the third evincing a tendency to hemorrhage. The name agranulocytosis, first used by Schultz, has been used by some as synonymous with agranulocytic angina and by others for differentiation. Only one condtion appears common to all these cases, namely, the lack of granulocytes; therefore agranulocytosis or granulocytopenia would seem the most suitable name. While some cases may seem to fall into definite groups, so many cannot be classified that it would be too arbitrary to justify separation until other factors are discovered that will more distinctly differentiate the various types of cases.

Bacteriologic study has not yet given any clear-cut results. There are reports of a number of positive blood cultures, but the variety of organisms found has only added to the confusion. The organisms are, for the most part, various types of staphyloocci and streptococci. Friedemann isolated *Bacillus pyocyaneus* from the blood stream once. Lovett found the same organism in the throat and determined that the isolated organism caused a relative lowering of the granulocyte count in rabbits. Dasse also found the organism in the throat in almost pure culture and verified Lovett's animal experiments. The blood cultures were negative in both cases. Vincent's organism frequently has been isolated from the throat, Harkins reporting it in five of his cases. Arsphenamine was used in several of his cases without apparent ill effects. Yet Farley's cases seemed to be due to the use of arsphenamine. Other throat cultures have shown a large variety of organisms that have been regarded as secondary invaders. In some cases in which a blood count has been taken early, a lack of granulocytes was found before the ulcerations appeared. Roberts and Kracke's patient showed only 10 per cent granulocytes seventy-two hours before and no granulocytes the last twnety-four hours before she became ill. Cultures of the bone marrow have been taken by some workers but organisms were not found. The cases reported are endemic in character and there is no evidence of transmission by direct contact. One of the cases reported by Harkins as agranulocytic angina followed extraction of an abscessed tooth, a second case followed an abscess in the neck after tooth extraction, while a third case began one week after tonsillectomy. These, as well as other reports, indicate that some slight infection may in certain people precipitate the illness. Harkins finds reports of at least six cases presenting an abnormal granulocyte count prior to the onset of the illness.

Is granulocytopenia a new disease or were cases not recognized or reported before Schultz's description? Harkins has collected reports of about 150 cases from the literature with a mortality of 82 per cent. Reports indicate that patients without necrotic ulcers recover more frequently, which helps to account for his lower mortality. The reports also indicate that the ultimate prognosis of patients who recover may not be so good. There are at least five cases on record in which the patient seemingly recovered only to succumb to another attack in an interval of from three months to two years. All cases of agranulocytic angina should be studied exhaustively both clinically and bacteriologically if anything is to be known about the etiology. Lovett's work should be extended and attempts should be made to see whether a definite syndrome can be produced experimentally. At present it would seem that agranulocytic angina or, better, granulocytopenia is not a definite clinical entity but represents an indefinite group of cases resulting from some injury to the granulopoietic mechanism.—*J. A. M. A.*, Nov. 8, 1930.

Mortality from Senility

Old age, which is the only really respectable disease recognized as a cause of death, is responsible for only two per cent of all deaths.

MEDICAL BOOK NEWS

Edited by WILLIAM HENRY DONNELLY, M.D.

All books for review and communications concerning Book News should be addressed to the Editor of this department at 1313 Bedford Avenue, Brooklyn, New York.

APRIL

REVIEWS

Collected Papers of The Mayo Clinic and The Mayo Foundation

COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION. Edited by Mrs. M. H. Mellish, and others. Volume XXI, 1929. Philadelphia and London, W. B. Saunders Company, 1930. 1197 pages, illustrated. 8vo. Cloth, $13.00.

In the foreword of this volume, the Division of Publications of the Mayo Clinic and the Mayo Foundation explain their method of editing the material appropriate for publication in a single volume by stating that "It has seemed appropriate, in compiling a single volume of the collected papers each year, to select that material which might prove of most service to the general practitioner, diagnostician and general surgeon."

There were 471 papers from which to make selections. Of these, ninety are reprinted in full, twenty-three are abridged, sixty-eight are abstracted, and to 290, references only are given.

In reviewing this volume of 1197 pages, with its complete index of subjects, one must congratulate the Division of Publications for selecting a wealth of material which has such a definite appeal to a wide range of medical readers. Those who have hesitated to consult these annual publications because of the impression that surgery and surgical technique were the subjects discussed will be pleasantly surprised to find so much information on the theory, the science and the progress of medicine.

J. RAPHAEL.

Practical Treatise on Diseases of the Digestive System

PRACTICAL TREATISE ON DISEASES OF THE DIGESTIVE SYSTEM By L. Winfield Kohn, M.D. Two volumes. Philadelphia, F. A. Davis Company, 1930. 1125 pages, illustrated. 8vo. Cloth, $12.00.

An abbreviated encyclopedic reference book on diseases of the digestive system has been made possible through the masterly work of Dr. Kohn. His treatise is most complete. The anatomy and histology of the digestive system are thoroughly and briefly described. Special consideration has been given to the physiology of the alimentary tract. The method of taking a good history and its importance have not been overlooked by the author, who also gives us many valuable diagnostic pointers in his chapter on general observations and objective findings. The succeeding chapters take up mechanical, chemical, and cytological methods, secretory and excretory findings, fluoroscopy and *x*-ray, neurological and clinico-physiological considerations.

With this comprehensive and important though somewhat lengthy introduction, the author proceeds to a presentation of diseases of the mouth cavity, which are given unusual consideration in this book. Next in order are described diseases of the tongue, salivary glands, esophagus, stomach, intestines, liver and bile passages, pancreas, peritoneum, omentum and mesentery. An entire chapter is given to diseases in other organs and extra-ailmentary affections which produce gastro-intestinal symptoms, e.g., diseases of the heart and circulation, broncho-pulmonary diseases, metabolic and deficiency diseases, the anemias, endocrine dysfunction, etc. The last three chapters deal with diet, therapeutics, and surgery of the gastro-intestinal tract.

G. J. B.

Infant Feeding in General Practice

INFANT FEEDING IN GENERAL PRACTICE. By J. V. C. Braithwaite, M.D., M.R.C.P. New York, William Wood & Company, 1930. 140 pages. 12mo. Cloth, $1.75.

This little volume is taken from the personal experience of a general practitioner and written for general practitioners. The most meritorious thing that can be said about this treatise is that it sticks to its subject-matter, and is brief, one might say too much so to be used as a reference book by the average physician in this country.—T. B. G.

Treatment of Epilepsy

TREATMENT OF EPILEPSY. By Fritz B. Talbot, M.D. New York, The Macmillan Company, 1930. 308 pages. 8vo. Cloth, $4.00.

As the title indicates, this book is devoted to the modern phases of therapy in epilepsy.

The history of the disease, the etiological relationship of heredity, birth trauma, tumor and diseases of the Gastro-Intestinal Tract, are briefly stated. A few pages are also devoted to pathology, symptomatology, diagnosis and prognosis.

With the exception of those cases where surgery may be employed, successful therapy depends upon attention to physical hygiene, social and mental hygiene, drugs and diet. Physical hygiene involves proper exercise, postural therapy to avoid constipation, sufficient sleep, and correction of physical defects. The environment of the epileptic should be compatible with a normal active life, free from over-strain and worry. Education should be carried out preferably by private instruction in small groups and away from the large cities. A proper vocation should be selected, depending upon the patient's abilities. In the discussion of drug therapy, both luminal and bromides are recommended.

The author devotes the last half of the book to dietary therapy. The elements in the production of ketosis, acidosis and alkalosis are reviewed. The author points out, that in the dietetic treatment of epilepsy, whether by a high fat-low carbohydrate diet, whether by fasting, limitation of fluid intake, or by restriction of sodium chloride, the common factor is dehydration. The author prefers the use of the Ketogenic diet for this purpose. The method of calculating a diet is described. Several cases are cited and the dietary principles demonstrated.

There is an extensive bibliography.

This book is extremely valuable for the general practitioner who desires a knowledge of the newer principles in the dietary treatment of epilepsy, with practical assistance in their application to the patient.

STANLEY S. LAMM.

Manual of Normal Physical Signs

A MANUAL OF NORMAL PHYSICAL SIGNS. By Wyndham B. Blanton, M.A., M.D. St. Louis, C. V. Mosby Company, 1930. Second edition. 246 pages, illustrated. 8vo. Cloth, $3.00.

This, the second edition of a most useful little book dealing with fundamentals, will find a cordial welcome. It represents a careful revision of the first edition and the added illustrations clarify the text. The student particularly will profit by mastering it before diving into the sea of signs signifying disease. The electrocardiography of the normal heart is described and illustrated.

A. C. J.

Diathermy in Oto-Laryngology

DIATHERMY MEDICAL AND SURGICAL IN OTO-LARYNGOLOGY. By Dan McKenzie, M.D. New York, The Macmillan Company, 1930. 184 pages, illustrated. 8vo. Cloth, $4.00.

Here in a small volume the author presents the very best in the fields of both medical and surgical diathermy as applied to oto-laryngology. The opening chapter presents a brief but inclusive description of the basic principles involved. There follow two chapters devoted to exposition of the medical and surgical uses in a general manner. The remaining chapters include a thorough and highly instructive description of the electro-surgical technique, with particular reference to the various organs and pathological conditions.

Many interesting case records are included. The book is well written and clearly printed and illustrated, and must be considered a valuable fund of information on its subject.

JEROME WEISS.

Text-Book of Gynecology

A TEXT-BOOK OF GYNECOLOGY. By Arthur Hale Curtis, M.D. Philadelphia and London, W. B. Sounders Company, 1930. 380 pages, illustrated. 8vo. Cloth, $5.00.

To epitomize any specialty with clarity and accuracy is indeed an art. Thus one can compliment the author of this book on the art of presentation as it certainly, for the student and general practitioner, makes easy the subject of gynecology.

The illustrations in this book are even as the text-clarity itself.

To recommend the text-book is to repeat what has already been said.

G. W. PHELAN.

Chronic Nasal Sinusitis

CHRONIC NASAL SINUSITIS AND ITS RELATION TO GENERAL MEDICINE. By Patrick Watson-Williams. New York, William Wood & Company, 1930. 221 pages, illustrated. 8vo. Cloth, $5.00.

The author exhibits the rare faculty of presenting a live subject in surprisingly complete and condensed fashion. He assumes that the reader has a fair knowledge of the underlying anatomy and physiology. While it is evident that his "Diagnostic exploral suction" technique comprises the hub about which the work is constructed, nevertheless many important related clinical factors are included without which the monograph would be incomplete.

Early chapters introduce the subject with brief consideration of physiology, pathways of infection, bacteriology, influence of focal sinus infection on endocrine function, etc. The chapter dealing with sinusitis in children and familial infection contains interesting confirmatory data from the writer's personal files. Concerning relationship of chronic sinus infection to psychosis there are presented a number of case records in support of the author's conclusions. His experiences with regard to the influence of chronic sinus infection on the upper respiratory, gastro-intestinal and endocrine systems are supported by many observers.

Transillumination and *x*-ray are considered as aids in diagnosis. The limitation of their value is frankly admitted. Detailed discussion of the valuable diagnostic method of exploral suction is justified. Anatomical irregularities responsible for errors in diagnosis are briefly discussed and constitute a practical and helpful consideration. The value of nasal and postnasal endiscopy can hardly be overestimated. The rhinologist who avails himself of these diagnostic agencies need seldom err in the recognition of focal or latent infections of nasal sinus origin.

We deem it advisable to call attention to the method of control of spheno-palatine arterial bleeding by packing which is not in accord with the generally accepted procedure, and should not be practiced. (p. 200).

Because it fills such an important clinical gap this offering of Doctor P. Watson-Williams is considered a necessary contribution that may be read with profit by the rhinologist, internist and neurologist.

H. MEYERSBURG.

A Hemato-Respiratory Study of 101 Consecutive Cases of Stammering

A HEMATO-RESPIRATORY STUDY OF 101 CONSECUTIVE CASES OF STAMMERING. A Thesis Presented to the Faculty of the Graduate School, University of Pennsylvania, in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy. By Max Trumper. Philadelphia, The Author, 1928. 72 pages, illustrated. 8vo.

A thesis concerning a disorder, of which according to the author's conservative estimate, one half million people in the United States are victims.

The author lists some fifty methods or instructions which are used in the various so-called cures of stammering.

Several of them are a thousand years old. Most of them are occasionally effective. None of them satisfactory.

Various theories of stammering are discussed and the conclusion reached that "one of the most prominent features of, if not a primary factor in the production of stammering is the disturbance of the mechanism of respiration,—and, finally the hematologic compensation concomitant with rapid shallow breathing supports Bluemel's theory of cerebral congestion with resulting transitory auditory amnesia as the explanation of stammering."

L. FEINIER.

Die Lehre Vom Unbewussten in der Deutschen Philosophie (The Psychology of Unconsciousness in German Philosophy)

DIE LEHRE VOM UNBEWUSSTEN IN DER DEUTSCHEN PHILOSOPHIE. Von Professor Otfried Müller. München, Arztlichen Rundschau, Otto Gmelin, 1930. 31 pages. 8vo. Paper, Marks 1.50. (Heft 38: Sammlung diagnostisch—therapeutischer Abhandlungen für den praktischen Arzt.)

This pamphlet is a study of the views of the older German philosophers with the aim of applying their ideas of the unconscious to the medical aspects of the question. It is especially interesting for those physicians who are concerned with the psychological in medicine.

STANLEY S. LAMM.

Krankheiten des Herzens und der Gefasse (Diseases of the Heart and Blood Vessels)

KRANKHEITEN DES HERZENS UND DER GEFASSE. Von Dr. Oskar Burwinkel. 2 . . . Aufl. München, Aerztlichen Rundschau Otto Gmelin, 1930. 154 pages. 8vo. Paper, Marks 8.00.

This book has been written with the object of filling the gap between experimental and clinical study of the heart and blood vessels. It is divided into two portions, a general and special section.

The general section is concerned with the principles of the anatomy of the heart including, a discussion of the origin of the cardiac rhythm. The author then takes up the type of history necessary in a cardiac case and the physical examination. Each symptom and sign is evaluated and explained. In turn are taken up, cardiac hypertrophy, dilatation and cardiac insufficiency, followed by a presentation of the relation of carditis to the other organs of the body. The effect of pregnancy and tuberculosis on heart disease is considered. The final portion of the general section is devoted to a study of such therapeutic aids as carbon-dioxide baths, climate, diet, blood letting, and the use of digitalis and morphine.

The special section is devoted to a brief study of the more important diseases, including pericarditis, valvular disease, myocarditis, arterio-sclerosis, and aneurysm. The prognosis, symptomatology and treatment of each disease is discussed. The technique of venupuncture, pericardial tap and paracentesis is described. A series of prescriptions is appended as well as a complete index.

This book will not offer much that is new to the specialist in heart disease, but to the general practitioner it serves as an excellent opportunity of reviewing the diseases of the heart and blood vessels.

STANLEY S. LAMM.

Pathology of Internal Diseases

THE PATHOLOGY OF INTERNAL DISEASES. By William Boyd, M.D., M.R.C.P. Philadelphia, Lea & Febinger, 1931. 888 pages, illustrated. 8vo. Cloth, $10.00.

The Pathology of Internal Diseases by Boyd is a treatment of Pathology that makes the most delightful reading. In a most concise, clear and enjoyable form, the author describes the pathology of the specific diseases according to the organs in which they occur and then proceeds to correlate the symptomatology to the organic changes. Rightfully, he presents only accepted and approved conceptions of pathogenesis, avoiding almost completely controversial aspects. For this reason he transmits to the reader very definite ideas. This is of exceptional advantage to both the student and general practitioner, although the specialist in pathology would necessarily find objection.

Special mention must be made of the author's consideration of the diseases of the heart and blood vessels, including the newer ideas in: rheumatism, tuberculosis, diseases of the liver and gall bladder, kidneys, thyroid gland and the nervous system. The illustrations are abundant and for the most part excellent. They have been selected with judgment, and details are brought out with exceptional clarity.

Criticism might be offered because of the brevity with which the subject is handled, but the author very properly explains the reason for this. The volume cannot be too highly recommended to those who wish to practice the art of medicine with a better understanding of the fundamental organic changes which are responsible for symptoms. It is not intended as a reference book for the pathologist. There is no question, however, that the author has succeeded in his purpose, namely, that of supplying a book which acts as a link between the student or practitioner and the pathologist. Together with the companion book, the author's Surgical Pathology, it covers the field in both surgery and medicine, in a most complete manner. For the active man in medicine, be he surgeon or internist, this volume will find a place on his shelves as a very valuable book representing medical thought in pathology, brought up-to-date to the last minute.

MAX LEDERER.

Abdomino-Pelvic Diagnosis in Women

ABDOMINO-PELVIC DIAGNOSIS IN WOMEN. By Arthur John Walscheid, M.D. St. Louis, The C. V. Mosby Company, 1931. 1000 pages, illustrated. 4to. Cloth, $12.50.

A very large book devoted to gynecological diagnosis. Not intended for the undergraduate student—he never could wade through it, it may interest general practitioners looking for special information. Written from a rather new point of view, it is of interest mainly for what the author calls his "anthropological sub-stratum." It correlates many interesting facts of female morphology, and has some value from a medical-legal standpoint. Too much space is given to pelvic lesions seldom seen, while common ones are not made plain enough. It fails to teach diagnosis and if anything, is valuable as a book of reference for the general practitioner.

C. A. G.

Legal Medicine and Toxicology

LEGAL MEDICINE AND TOXICOLOGY. By Ralph W. Webster, M.D. Philadelphia and London, W. B. Saunders Company, 1930. 882 pages, illustrated. 8vo. Cloth, $8.50.

The importance of Medical Jurisprudence cannot be gainsaid if one consults the records of our courts and learns the vast number of cases in which doctors have testified. For the sake of upholding the prestige of the medical profession, the reviewer feels that it is incumbent upon every physician to become conversant with legal procedure and what is expected of him on the witness stand. This he can learn to good advantage by consulting a book such as Dr. Webster has so admirably prepared.

Many questions are elucidated by the author, and valuable information can be found as to the causes of death, the identity of the living and the dead, the results of injuries and wounds of all kinds, life and accident insurance, mental incompetence from various causes, malignering, legitimacy, abortion and infanticide, impotence, sterility and unnatural offenses, marriage and divorce, malpractice, and toxicology. More than five hundred pages have been allotted to the study of toxicology, which will give some idea of the thoroughness with which the author has treated this subject.

There is no doubt that this work will prove an indispensable source of knowledge in medico-legal problems, and an inestimable asset to every physician. G. J. B.

Diseases of the Ear

DISEASES OF THE EAR. By Philip D. Kerrison, M.D. Fouth edition. Philadelphia and London, J. B. Lippincott Company, 1930. 627 pages, illustrated. 8vo. Cloth, $7.50.

The author treats the subject of otology in a comprehensive and coherent manner, and succeeds in making interesting reading matter of his material by giving his personal experiences and judgments derived therefrom. We find here, not a mere compilation of dull facts, but a gathering of data such as comes from a wide range of experience. The writer clearly presents the anatomy and physiology of the ear, with a brief and complete functional examination of the hearing apparatus. The description of the labyrinth as to structure, physiology and pathology is enlightening and direct, and a precise understanding of the functions of the hearing and static apparatus can be quickly obtained by reading the descriptions in this book. Much theoretical discussion is omitted, and the practical aspects of otology are given prime consideration. The discussions of the acute and chronic diseases of the external, middle ear and mastoid process are as important to the otologist as to the student and practitioner. The book also contains a short, but illuminating, discussion of otosclerosis.

The author's treatment of the various types of labyrinthine pathology is exceptionally valuable for the personal and general opinions stated. The material here presented is well worth perusal and thought by all otologists.

The presentation of intracranial complications contains the most recent advancement of otology in the field of cranial surgery, and the otoneurological discussions are highly illuminating, and yet simply written.

In the chapter on "Otologic Lessons of the World War," one is given an insight into the pathology and neuroses brought about by violent explosions. The cases of pithiatism are unusual, and emphasize the necessity for psychiatric therapy in this field.

The chapters on salvarsan treatment and vaccine therapy are concise and clear.

The discussion of deaf mutism contains enlightening material, and calls attention to a timely subject for study. The author's advice to otologists to visit the various institutions deserves consideration.

The final chapter on Acoustic tumors is exceptionally good, and serves to put the reader on the alert for such cases in their incipiency.

We have noted in a few instances omissions that might have been included in the subject matter under discussion; also a few typographical errors which should be corrected in future editions.

The book as a whole is to be recommended from many angles, including the factor of personal experience, insight and opinion which the author has included throughout, and will be read with great profit. A. G. SILVER.

Your Vision and How to Keep It

YOUR VISION AND HOW TO KEEP IT. By H. G. Merrill, M.D., F.A.C.S., and L. W. Oaks, M.D. New York and London, G. P. Putnam's Sons, 1930. 145 pages, illustrated. 8vo. Cloth, $1.50.

To those of us who are interested in the human body in health and disease, it seems almost unbelievable that the public is aroused with so much difficulties to consider its wonders and its care. A man will wear himself out trying to understand the structure of a poem; another man will spend much thought on the construction of a garage; they will both worry over the incompatibilities of their particular interests, but cannot be aroused to any serious consideration of their corporal selves and will wait until actual disorganization becomes evident as sickness, before they will take the least trouble to inquire into the state of their health.

That the eye is neglected in a civilized land through conceit and false vanity seems hardly conceivable; but such is the case.

The little book "Your Vision and How to Keep It" is an effort on the part of the authors to arouse the interest of the general public in their own eyes. While such a presentation has been offered many times in the past, this work approaches the subject from a slightly different angle, which makes it very attractive. It is "easy reading" as well. It obviously cannot cover the whole field, but certain important aspects have been stressed in a satisfactory way.

Certain conditions have been elaborated which the reviewer would replace with situations that the layman is apt to meet in his daily contacts. Thus the pages on the aqueous and vitreous might be replaced with a discussion of the relation of systemic disease to the eye.

The illustrations are for the most part good, though figures 1 and 2 can be improved. The reviewer has felt that a cross-section is less understandable to the average reader than is a carefully drawn picture showing three dimensions, with parts cut away.

The book has a definite place in the educational field.

J. N. EVANS.

Practical Radiation Therapy

PRACTICAL RADIATION THERAPY. By Ira I. Kaplan, B.S., M.D. With a special chapter on applied x-ray physics by Carl B. Braestrup, B.Sc., P.E. Philadelphia and London, W. B. Sounders Company, 1931. 354 pages, illustrated. 8vo. Cloth, $6.00.

A very practical consideration of the radiotherapy treatment of benign and malignant disease as practiced at Bellevue Hospital, New York. The largest municipal hospital in the United States.

Each disease, from superficial skin infections to deep seated pelvic malignancies, is separately discussed and the choice of treatment as followed at this leading institution is described. The technic of application is vividly and succinctly portrayed so that one, with relatively little previous knowledge, can safely employ the book as a therapeutic guide.

Illustrations are numerous and a liberal proportion of photographs before and after treatment are presented. A true evaluation of radiotherapy modestly pervades the book with no claim for the impossible.

A chapter is devoted to endothermy which is concomitantly or independently employed in a number of cases such as bulky cervical malignancies, sloughing breast neoplasms, and in some of the more radio-resistant skin lesions.

The well known physicist, C. B. Braestrup, contributes an instructive chapter on the physics of radiation. It is well presented, easy of comprehension and discusses X-ray apparatus, measurements and physical dosage.

It is a book every radiotherapist should be glad to have on his shelf, either for general education or as a reference work for dosage and technic. MILTON G. WASCH.

Die Entwicklung der Lungentuberkulose des Erwachsenen (Development of Adult Pulmonary Tuberculosis)

DIE ENTWICKLUNG DER LUNGENTUBERKULOSE DES ERWACHSENEN. Von Dr. Brecke, and others. München, Aerztlichen Rundschau Otto Gmelin, 1930. 124 pages, illustrated. 8vo. Paper, Marks 7. (Sammlung diagnostisch-therapeutischer Abhandlungen für den praktischen Arzt. Heft 35.)

This is a compilation of papers presented before the Wurttemberg Medical Society on the pathology of pulmonary tuberculosis in adults. Apical tuberculosis is discussed and a plea made to give up the concept that all adult pulmonary tuberculosis begins at the apex. There is an interesting table showing the incidence of tuberculosis in 2,000 autopsies. There are many instructive Roentgenograms. This book should be of interest to all practitioners of medicine. STANLEY S. LAMM.

Handbook of Diseases of Infants and Children

HANDBOOK OF DISEASES OF INFANTS AND CHILDREN for students and practitioners. By F. M. B. Allen, M.D., M.R.C.P. New York, William Wood & Company, 1930. 595 pages. 8vo. Cloth, $5.00.

This is a 600 page text book on general pediatrics without illustrations. Facts and not theories are dealt with in a practical manner, and it is modern in every respect. To those who have not an up-to-date text on pediatrics, and especially to those who wish to get a British viewpoint, one would make no mistake in procuring this book. T. B. G.

Heilstrahlen Oder Heilschwindel (Electro-Therapy or Therapeutic Deception)

HEILSTRAHLEN ODER HEILSCHWINDEL. Wie kann Zeileis überwunden werden? Von Professor Dr. Med. Hans Hübner. München, Arztlichen Rundschau, Otto Gmelin, 1930. 32 pages. 8vo. Paper, Marks 1.20.

The author attempts to rescue the use of high frequency therapy from the discard, where it had been placed by an Austrian nature healer due to the mysticism woven about it. The high frequency therapy is a branch of electro-therapy which aims to stimulate the body and cell function through a systematic plan of treatment. The author feels it has a definite place in medicine.

STANLEY S. LAMM.

William Stewart Halsted: Surgeon

WILLIAM STEWART HALSTED: Surgeon. By W. G. MacCallum. Baltimore, The Johns Hopkins Press, 1930. 241 pages, illustrated. 8vo. Cloth, $2.75.

The introduction to this book by Dr. William H. Welch is a more excellent review than could be written by any one else. We believe that no one knew Dr. Halsted as Dr. Welch knew him. From the early days of Halsted in New York all the way through Dr. Welch was his close friend, supporter and advisor, and there was no one that Dr. Halsted thought more of than he did of Dr. Welch.

Dr. Welch had collected material contemplating a biographical sketch of Halsted introductory to the volumes of his collected papers, but thought wise not to continue with this; he thought an adequate portrayal of Halsted's life required a more detached point of view than it was possible for him to occupy.

Dr. Welch with his characteristic insight and analysis believes that Dr. MacCallum, thoroughly familiar with Halsted's life and work in Baltimore, has been enabled to present a vivid and truthful portrait of one whose interesting and unusual personality, whose great influence as teacher and surgeon, and whose important scientific and practical contributions to surgery merit such a narrative of his life and work as is here offered.

In this estimate of Dr. MacCallum's biography of Halsted the reviewer must agree most heartily. It is a most unusual, interesting and useful life which is here portrayed most understandingly and sympathetically. Not the least interesting to note is the great difference in personality as shown in his early New York life and his later life in Baltimore.

The book will be read with interest by all students of surgery not only for its biographical interest, but also for the much practical information that is conatined therein. It will be read with double interest by those who knew Dr. Halsted.

The reviewer has but one criticism to make, and that not a logical one since it is a biography of Halsted that is under review. The biography might have contained more ample references to Dr. Halsted's many associates, assistants and students than it does. It will repay a second reading and Dr. MacCallum is to be felicitated.

RUSSELL S. FOWLER.

Anatomical Studies on the Motion of the Heart and Blood (Harvey)

EXERCITATIO ANATOMICA DE MOTU CORDIS ET SANGUINIS IN ANIMALIBUS. (Anatomical Studies on the Motion of the Heart and Blood.) By William Harvey, M.D. An English translation with annotations by Chauncey D. Leake. Springfield, Illinois, Charles C. Thomas, 1931. 150 pages, illustrated. 8vo. Paper, single copies $1.00. 25 or more copies 90c per copy, less discount of 25%.

1928 marked the three-hundredth anniversary of the publication of Harvey's epoch-making work, although he had presented his discovery in his Lumeleian lecture before the Royal College of Physicians as early as 1616. As a contribution to the celebration of this anniversary, Thomas brought out a very fine facsimile of the first edition of the work, together with a new translation by Leake, which was offered for a very reasonable price ($3.50). A new edition of this translation together with the annotations and the Chronological Table, but without the Latin text, is now offered, bound in heavy paper, and selling for ninety cents. The illustrations are retained and the paper and print are the same as in the preceding fine edition. This brochure is designed for students, and we are informed that over 3,500 copies were spoken for by medical students at Yale, Harvard, Pennsylvania and many other schools, prior to publication. The ideal time to become acquainted with Harvey is as a student of physiology. A knowledge of his work and of its place in the history of medicine, in the history of scientific thought, at this time, should be inspiring. It is full of interest at any time. In making the work available in this attractive form, the publisher is offering to the present generation of medical students a cultural influence that may have a far reaching effect. It is to be hoped that succeeding classes will be tempted in the same way to familiarize themselves with this masterpiece.

T. H.

Haut—Und Haarpflege (Care of Skin and Hair)

HAUT—UND HAARPFLEGE, EINE NATURLICHE SCHONHEITSPFLEGE. Von Dr. E. Hesse. Zweite neubearbeitete Auflage. München, Arztlichen Rundschau, Otto Gmelin, 1930. 65 pages. 8vo. Paper, Marks 2.00. (Heft 6/7: Der Arzt als Erzieher.)

This is a dissertation on the hygiene and care of the skin and hair. The book is divided into three main parts. 1, the hygiene of the skin, 2, the diseased skin and its care, 3, care of the hair. The book is quite simple in its presentation.

STANLEY S. LAMM.

BOOKS RECEIVED

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review notes will be promptly published shortly after acknowledgement of receipt has been made in this column.

RECORDING AND REPORTING FOR CHILD GUIDANCE CLINICS. By Mary Augusta Clark. New York, The Commonwealth Fund, 1930. 151 pages, illustrated. 4to.

THE AMERICAN JOURNAL OF CANCER. Edited by Francis Carter Wood. Vol. XV, No. 1, January, 1931. New York, The American Journal of Cancer, 1931. 361 pages, illustrated. 8vo. Subscription price in the United States $5.00, in all other countries $5.50.

CANCER: Its Origin, Its Development and Its Self-Perpetuation. The therapy of operable and inoperable cancer in the light of a systemic conception of malignancy. A research. By Willy Meyer, M.D. New York, Paul B. Hoeber, Inc., 1931. 427 pages, illustrated. 8vo. Cloth, $7.50.

TALKS ON TUBERCULOSIS with Patients and their friends. By John B. Hawes, 2nd, M.D. Boston and New York, Houghton Mifflin Company, 1931. 179 pages. 12mo. Cloth, $2.00.

CHILDREN WHO RUN ON ALL FOURS and Other Animal-Like Behavior in the Human Child. By Ales Hrdlicka, M.D., Sc.D. New York, Whittlesey House, McGraw-Hill Book Company, Inc., 1931. 418 pages, illustrated. 8vo. Cloth, $5.00.

RACE PSYCHOLOGY: A Study of Racial Mental Differences. By Thomas Russell Garth. New York, Whittlesey House, McGraw-Hill Book Company, Inc., 1931. 260 pages, 8vo. Cloth, $2.50.

MODERN METHODS OF TREATMENT. By Logan Clendening, M.D. Fourth edition. St. Louis, The C. V. Mosby Company, 1931. 819 pages, illustrated. 8vo. Cloth, $10.00.

CHININ IN DER ALLGEMEINPRAXIS Unter Berücksichtigung Pharmakologischer Befunde. By Dr. Fritz Johannessohn. Amsterdam, Bureau Tot Devordering Van Het Kinine-Gebruik, 1930. 232 pages, illustrated. 8vo. Paper. (A copy of this publication will be sent to physicians gratis upon request.)

LEBER-KOCHBUCH: Anleitung und Kochrezepte zur praktischen Durchführung der Leberdiät bei Blutkrankheiten. By Dr. R. F. Weiss. 2 . . . Aufl. München, Aerztlichen Rundschau Otto Gmelin, 1931. 60 pages. 8vo. Cloth, Marks 2.40.

WESEN UND ERKENNUNG DER PROSTATAHYPERTROPHIE: Anzeigenstelling zu ihrer Behandlung. By Dr. Kurt Werwath. München, Aerztlichen Rundschau Otto Gmelin, 1931. 51 pages. 8vo. Paper, Marks 2.00 (Sammlung diagnostisch-therapeutischer Abhandlungen für den praktischen Arzt. Heft 39.)

AN INTRODUCTION TO PRACTICAL BACTERIOLOGY: A Guide to Bacteriological Laboratory Work. By T. J. Mackie, M.D., D.P.H. & J. E. McCartney, M.D., D.Sc. Third edition. New York, William Wood & Company, 1931. 421 pages, illustrated. 12mo. Cloth, $3.50.

A HANDBOOK ON DISEASES OF CHILDREN including Dietetics and the Common Fevers. By Bruce Williamson, M.D., M.R.C.P. New York, William Wood & Company, 1931. 290 pages, illustrated. 12mo. Cloth, $3.50.

LES ASPHYXIES ACCIDENTELLES (Submersion—Electrocution Intoxication oxycarbonique): Étude Clinique, Thérapeutique et Préventive. By C. Cot. Paris, N. Maloine, 1931. 414 pages, illustrated. 8vo. Paper, 50 frs.

THE RECOVERY OF MYSELF: A Patient's Experience in a Hospital for Mental Illness. By Marian King. New Haven, Yale University Press, 1931. 143 pages. 8vo. Cloth, $2.00.

CONDITIONS AND CONSEQUENCES OF HUMAN VARIABILITY. By Raymond Dodge. New Haven, Yale University Press, 1931. 161 pages. 8vo. Cloth, $2.50. (Institute of Human Relations.)

AIDS TO BACTERIOLOGY. By William Partridge, F.I.C. Fifth edition. New York, William Wood and Company, 1931. 311 pages. 16mo. Cloth, $1.75.

THE THEORY OF OBSTETRICS: A Functional Study of Child-Bearing Based on a New Definition of Normal Labour and on a New Theory of Uterine Inertia. By M. C. de Garis, M.D. New York, William Wood and Company, 1931. 272 pages. 8vo. Cloth, $5.00.

TEXTBOOK OF HUMAN EMBRYOLOGY. By Cleveland Sylvester Simkins, Ph.D. Philadelphia, F. A. Davis Company, 1931. 469 pages, illustrated. 8vo. Cloth, $4.50.

EASIER MOTHERHOOD: A Discussion of the Abolition of Needless Pain. By Constance L. Todd. New York, The John Day Company, 1931. 199 pages. 12mo. Cloth, $2.00.

ESSAYS IN THE HISTORY OF MEDICINE. By Max Neuburger, M.D. Translated by various hands and edited by Fielding H. Garrison, M.D. New York, Medical Life Press, 1930. 210 pages, illustrated. Cloth, $5.00.

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(N) "The Doctor Visits 'Roche',"
(O) "The Mystery of Sleep." Hoffmann-La Roche Chemical Works.

MT- 61 "Urasal," An Improved Form of Hexamethylenamine Medication. Frank W. Horner, Inc.,

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MT-105 "Diagnosis and Treatment of Diseases of the Liver," "Diagnosis of Cardio-Vascular Diseases," "Diagnosis of Nervous and Mental Diseases." Three publications by Dr. Henry I. Berger, published by Peacock Chemical Company and Sultan Drug Company.

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MT-127 "When the Cross Roads are Reached in Hemorrhoids (Piles)," and "Urotropin, the Intravenous Administration of the Original Formaldehyde-Liberating Urinary and Systemic Antiseptic." Schering & Glatz, Inc.

MT-128 "Digitol," "Caprokol," "Diphtheria Antitoxin," "Super-Concentrated—Mulford," "Hexylresorcinol Solution S. T. 37." These and many others you can get literature on from Sharp & Dohme.

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MT- 65 An illustrated pamphlet of this well-known Goshen, N. Y., Institution. "Interpines."

MT-122 "Rejuvenation of Tired Business Men." Roosevelt Health Institute.

MT-125 The Ross Sanitarium. Illustrated Pamphlet of this well known Long Island Institution. Dr. William H. Ross.

MT-136 "Hospital Treatment for Alcohol and Drug Addiction." Charles B. Towns Hospital.

Perhaps there is something you need listed in the Classified!

Principles of Arthroplasty

Fred H. Albee, New York (*Journal A. M. A.*, Jan. 24, 1931), discusses in detail the technic of the operation and the after-treatment. He says that he knows of no operation in which the surgeon can turn to better use his knowledge of pathology, including roentgen pathology and bacteriology, of anatomy and the mechanics of joint movement, and his experience in the healing and adaptability of living tissues. Nor does he know of any operative procedure the successful conclusion of which, in all its phases, justifies more pride than that sequence of procedure, operative and postoperative, known as arthroplasty.

In Chronic Gastritis

In chronic gastritis, the first indication is the correction of the indigestion by dietary regulation. The next is cleaning the stomach of the tenacous mucus and stimulating the glands by lavage or the drinking of one-half to one pint of hot water an hour before meals. Last, but not least, to relieve anorexia and stimulate the restoration of normal function, prescribe Seng, alone, or in the following combination: Strychninae sulphatis, gr. ¼; Acidi Hydrochlorici, diluti, 3v; Seng qs. ad., 3vi; M. S., a tablespoonful in a wineglassful of water after meals.

Lymphoma Malignum (Hodgkin's Disease) and Lymphosarcoma

On the basis of the clinical and pathologic study of more than 500 cases of lymphoma malignum (Hodgkin's disease) and lymphosarcoma, Isaac Levin, New York (*Journal A. M. A.*, Feb. 7, 1931), concludes that both conditions are malignant tumors. Malignant lymphoma and lymphosarcoma are phases of the same pathologic entity and the two may exist in the same patient or even in the same region. Inflammatory lymphadenitis may be a precursor of a malignant lymphoma or lymphosarcoma. Nearly 50 per cent of all cases of lymphoma malignum and lymphosarcoma studied involved only one side of the cervical lymph nodes and were consequently in the early stages of the disease. All cases ultimately become generalized. Therefore, even in the earliest localized stages of the disease, all the other groups of lymph nodes and all the lymphoid tissue must generally be considered as potentially malignant. Every adenopathy the etiology of which is not certain must be carefully studied in order that a case of early Hodgkin's disease or lymphosarcoma may not be missed. The methods of radiotherapy employed should be similar to the methods employed in types of cancer in which metastases in distant regions are common (carcinoma of the breast). This means that not only must the involved area be treated, but also, prophylactically, the areas that are potentially malignant. Were the cases of lymphoma malignum (Hodgkin's disease) and lymphosarcoma diagnosed early and correct methods of radiotherapy instituted, the therapeutic results obtained by radium and roentgen therapy would become superior to those obtained today and the prognosis would improve greatly and the life of the patient would be prolonged considerably.

In Atonic Dyspepsia

The most frequent cause of atonic dyspepsia is, acording to Wheeler and Jack, "want of functional power both as regards gastric secretion and movements." While treatment must, of course, look to the underlying cause and where possible remove it, this immediate cause can best be remedied by the administration of Seng, 1 tablespoonful in water half an hour before meals. Seng restores the gastric tone and stimulates secretions without irritation. Samples and literature on request. Sultan Drug Co., St. Louis, Mo.

Acid Neutralization as a Factor in Relief of Pain From Gastric Ulcer

The effectiveness of sodium bicarbonate in the treatment of peptic ulcers must not be overlooked, but this antacid agent should not be administered alone, but accompanied by other bases which afford balance.

The commonly accepted antacids to be used for this purpose are contained in BiSoDol, which is a scientific combination of the sodium and magnesium bases with bismuth, anti-flatulents and flavoring. BiSoDol is being prescribed extensively as an alkalinizing agent, because of its advantages over single alkali medication. The formula has been carefully balanced. so that it produces immediate and effective neutralization without upsetting the stomach or tending to cause gastric derangement. BiSoDol offers quick relief from the well-known symptoms of gastric hyperacidity—nausea, cyclic vomiting, flatulence, sharp stomach pains, heartburn, acid eructation, and the like. In addition to its use in the above conditions, BiSoDol is prescribed as an agent to render the system susceptible to treatment for colds and respiratory affections. It is also recommended in the morning sickness of pregnancy and similar conditions where a controlled antacid is required.

Samples for further clinical tests will be gladly mailed to the profession upon request to The BiSoDol Company, New Haven, Connecticut.

Tabetic Arthropathies

Arthur Steindler, Iowa City (*Journal A. M. A.*, Jan. 24, 1931), relates his observation of sixty-four cases of arthropathy involving ninety-nine joints. Of these, only two, or possibly three, were definitely non-tabetic. In three cases, a diagnosis of cerebrospinal syphilis was made, and it is possible that in these the arthropathy was an advance symptom of oncoming tabes. He discusses the etiology, pathogenesis, pathology, microscopic pathologic changes, pathologic changes disclosed by roentgen rays, symptomatology, and treatment. Of his 64 cases, 42 were treated conservatively; 12 cases (15 joints) operatively, and 10 cases were not treated. The conservative treatment consisted in alinement and support by braces or casts, and in physical therapy; i. e., massage, exercises and muscle reduction. Of the 42 cases conservatively treated, 24 improved, 12 cases showed no change or got worse, and in 6 cases the result of treatment remained undetermined because of the shortness of observation time. As satisfactory result was considered an arrest of the destruction in the joint and such improvement in function as would result from adequate stabilization of the joint by portative apparatus. Twelve patients, in whom 15 joints were involved, were operated on. Of these 9 joints showed improvement of function, 5 were not improved and 1 case was undetermined.

Making Pregnancy Safe for Mothers

Doctors are of one mind about the importance of an extra calcium supply for women during pregnancy. The demands of the foetus sometimes literally deplete the mother's body of lime, so that this salt is withdrawn from her teeth and bones. Accordingly, doctors advise expectant mothers to adopt a diet rich in calcium and to get as much sunshine as they can.

As an added precaution many physicians prescribe Hagee's Original Cordial Compound because it contains this essential mineral in glycerophosphate form, which is highly assimilable. Research has long established the fact that calcium is more readily absorbed by the body when it is in an ionized state and in combination with phosphorus.

Another ingredient in Hagee's is true extract of cod liver oil that is utterly tasteless. This makes Hagee's acceptable to mothers even in the early months of pregnancy.

The makers of Hagee's Original Cordial Compound will be glad to send a sample to doctors if they address them at Katharmon Chemical Co., 101 N. Main Street, St. Louis, Mo.

To Cure "Habit Cough"

For the coughing habit which often remains after bronchitis or certain types of laryngitis, few prescriptions are more effective than Peacock's Bromides in regular dosage. They are just as valuable in most of the respiratory neuroses, reflex cough and pharyngitis. Where cocaine idiosyncrasy exists and irritability of the pharynx and larynx interferes with satisfactory examination one or two full doses will diminish the sensibility just as well as the local applications formerly practiced.

Radiotherapy for Inflammatory Conditions

Arthur U. Desjardins, Rochester, Minn. (*Journal A. M. A.* Feb. 7, 1931), says: If it can be assumed that the leukocytes, and especially the lymphocytes, which the organism mobilizes around the site of infection, represent an effort to localize the infection and to get rid of the infectious material by phagocytosis or otherwise, it must also be assumed that the infiltrating cells contain or elaborate within themselves the protective substances or other means which enable them to destroy or neutralize the bacterial or other toxic products which give rise to the defensive inflammation. If these assumptions are well founded, it seems not unreasonable to deduce that irradiation, by destroying the infiltrating lymphocytes, causes the protective substances contained by such cells to be liberated and to be made even more readily available for defensive purposes than they were in the intact cells. There can be little question that the rays act by destroying the infiltrating leukocytes and that the value of radiotherapy depends chiefly on such action. In favor of this view are the points already mentioned; namely, that the rapidity of recession of irradiated inflammatory lesions corresponds to the rate at which the normal lymphocytes are known to be influenced by exposure to the rays, and that a small or moderate dose of irradiation is sufficient or even preferable to a large dose. Other circumstances pointing in the same direction are that radiotherapy is most beneficial during the infiltrative stage and less beneficial during the suppurative stage (even then, some benefit may be derived) of the inflammatory process, and that, although many such lesions respond rapidly to treatment of this kind, some respond less rapidly or do not respond at all. In connection with the last point, variation in the degree of leukocytic infiltration of different lesions of the same character or of similar lesions of different character is a well known pathologic fact. Therefore, the degree of leukocytic infiltration must influence the action of the rays, because the rays can destroy lymphocytes only in proportion to the number of such cells. This is undoubtedly related to and probably explains the fact that, while many inflammatory lesions are influenced favorably by irradiation, some react much less or fail to show any reaction.

Sleep in Childhood and Youth

Sleep required by the average young child: At birth, 21-22 hours; at 6 months, 18 hours; at 1 year, 16 hours; 2-5 years, 14 hours.

Sleep required by the average older child: 6-7 years, 12 hours; 8-10 years, 11 hours; 11-12 years, 10-11 hours.

Sleep required by the average youth: 13-15 years, 10-12 hours; 16-18 years, 9-10 hours.

Cactina Pillets and the Heart Muscle

It is believed that the chief effect of cactus is on the heart muscle. Clinically it seems evident that Cactina Pillets find their greatest usefulness as adjuvant to more active cardiac stimulant and as maintenance measure where there is functional involvement of the cardiac muscle. There are numerous cases on record in which Cactina Pillets taken regularly for considerable periods have relieved patients with tobacco heart, irritable heart, general cardiac weakness following infectious diseases and have prevented the recurrence of discomfort or more definite symptoms.

Perhaps there is something you need listed in the Classified!

Color Therapy

Brightening of Walls in Mental Hospitals Said to Aid Patients.—Bright colors on the interior walls of institutions for the mentally afflicted help to bring about better mental attitudes, and may help toward cures among the patients, according to a statement by the California State Director of Institutions, Earl E. Jensen.

Drab grays are being replaced in California with pinks, yellows, greens, blues and other bright colors, he said, as the result of a year's experiment in the hospital at Napa.

"If you could have seen the faces of the patients at Napa a year ago when the walls were the conventional drab gray," said Mr. Jensen, "and then could see them today since the walls have been tinted bright hues, you would realize what a tremendous influence color can play. So successful has the experiment proved that we have been repainting the walls inside all of our six mental hospitals as rapidly as possible this summer.

"We use the light hues, avoiding dark blues, greens and browns, and especially red, which is known to have a distressing effect. Pinks, light blues and greens, yellows and tans, we have found, are those which have the most cheering effect on the patients. And even the nurses and other employees of the institutions are responding to the change. These asylums no longer are the drab, depressing places they once were. We have great hopes that the colors will help us in affecting cures and in generally brightening the lives of those intrusted to our care."—*The United States Daily.*

Attaining Cardiac Tone

Cardiac tone is coordination of dilation and emptying power to optimum efficiency. Where the heart efficiency is impaired by systemic disease or cardiac weakness, this should be attained not by driving the heart against odds but by a cardiac tonic that will steady and strengthen cardiac contractions. Cactina Pillets supply the needed steady strength without the risk of toxic by-effects or over-stimulation.

Chinese Pharmacopeia

A Chinese pharmacopeia is now in press and represents standards taken from British, American, German and Japanese sources. The metric system of weights and measures is carried out.